MAY, 1948

Printing Equipment *Engineer*

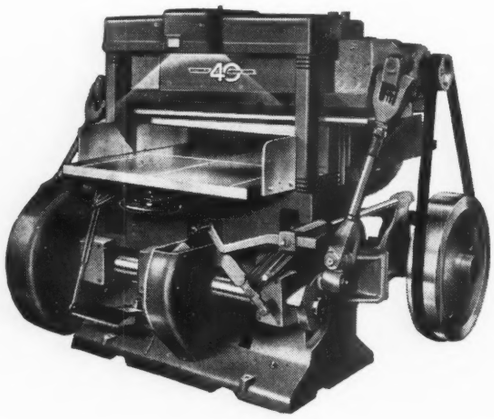
IT'S THE THINGS YOU *can't see* THAT CAN TEAR A CUTTING MACHINE APART

that's why we continue to stress the importance of DOUBLE-END-PULL *and* CONTINUOUS DOUBLE-SHEAR *knife action*

THE STRAIN on moving parts and bearings, as a paper cutter knife slices through a heavy pile of paper, is greater than most of us imagine. Unless this is properly taken into account in the design of the machine, undue wear will be the inevitable result. Strain, of course, is impossible to see. You might possibly be unable to notice wear, until it shows up in the form of excessive down time and high maintenance costs.

SEYBOLD DESIGN REDUCES STRAIN and, consequently, wear, by making it possible for the knife to glide through the pile, from the top to the *very last sheet*, at an angle calculated to require the minimum of effort. TWO sturdy pull bars, one at each end of the knife bar, pull the knife through the pile in a smooth, continuous stroke. The knife has no chance to fight the paper and, as a result, cuts are more accurate . . . chatter marks are eliminated . . knives stay sharp longer. This is what you'll get with "Double-End-Pull combined with Continuous Double-Shear knife action". Seybold alone offers it.

WHEN YOU BUY A PAPER CUTTER, demand satisfactory answers to such vitally important questions as (1) How well does it cut? (2) How much will upkeep cost? (3) How long will it produce efficiently?



EARLY DELIVERY OF 40" MACHINES

In line with our policy of "first come, first served", Seybold offers a limited number of Heavy-Duty 40" Paper Cutters for early delivery—as soon as 4 to 6 weeks in many instances. These machines are now on display at all Seybold district offices. Send in the coupon for additional information. Better yet, stop in and see this machine in action today. Find out for yourself why "Double-End-Pull, combined with Continuous Double-Shear knife action", makes such a big difference in paper cutter performance.

HARRIS-SEYBOLD

General Offices, Cleveland 5, Ohio

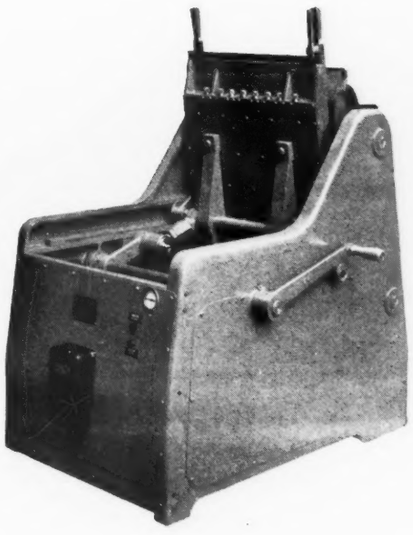
HARRIS PRESSES • SEYBOLD CUTTERS
OTHER GRAPHIC ARTS EQUIPMENT

DISTRICT OFFICES: New York, Chicago, Cleveland, Atlanta, San Francisco, Toronto

G

Harris-Seybold Company
General Offices, Cleveland 5, Ohio
( ) Please send additional information
( ) Please have representative call on me on or about
.....
Name.....
Title.....
Company.....
Address.....

STA-HI STURDINESS



When you buy new equipment for making flat casts, you want a machine that can "take it."

Built into every Sta-Hi Vacuum Flat Casting Box is that same solid, sturdy, precision construction that identifies all Sta-Hi newspaper production machinery.

For this reason a Vacuum Box built by Sta-Hi will give you years of smooth, steady, day after day perfection of performance and product.

If you want flat casts that will give the very best in printed reproduction, you owe it to yourself to investigate Sta-Hi's new "V-8" Vacuum Box before you buy.

It has a precision lock-up. It's easy to operate, easy to keep clean. It has finger-tip control of vacuum that can be applied to any size cast, from one up to eight column. It comes equipped with two sets of gauges, made up to your specifications, at no extra cost.

Delivery? . . . In from 30 to 60 days after you place your order. Write for full details.

STA-HI

STA-HI CORPORATION • *1020 CROCKER ST.* • *LOS ANGELES 21*

Production stepped up 2 ways
WITH IONOTRONS®

Arrows show four Ionotron Static Eliminators attached to the delivery end of a Miehle perfector in the plant of Quinn and Boden, Rahway, N. J.

Printers are reporting that Ionotron Static Eliminators step up production in two separate operations. The first is in the printing itself. The Ionotron is such an efficient static eliminator that it can cope with the higher static charges that accompany increased press speeds. Therefore, it becomes practical to increase the number of impressions per hour.

The second is in folding. Press jogging is so even that the final hand jogging, prior to folding, can be eliminated. One book manufacturer reporting these two production advantages is Quinn and Boden of Rahway, New Jersey.

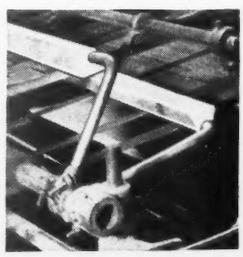
THE MODERN STATIC ELIMINATOR – Utilizing a unique application of a sound scientific principle, the Ionotron is totally different from old-fashioned static eliminators. The Ionotron bar contains a source of continuous radiation. This radiation ionizes the air and makes it a good conductor of static. The static then bleeds off harmlessly over the ionized air to ground.

There are no electric power connections, so it is shockproof. There is no flame. There is no contact between the Ionotron and the printed sheet. so there is no chance of smearing heavy forms.

NO OPERATING EXPENSE – The Ionotron consumes neither electricity nor gas, so there is no operating expense. It is long-lasting, as the radiation source has a half-life of 1,600 years. The only maintenance needed is to keep the active surface wiped clean with a soft cloth.

FOR ADDITIONAL INFORMATION–For further details about the application of Ionotrons to the gravure, letterpress, or offset printing machinery you use or build, fill in the coupon and mail it. There's no obligation.

EASY TO INSTALL—Application of the Ionotron to printing machinery is rapid and easy, as it requires only simple brackets and bolts.



IONOTRON *Static* **ELIMINATOR**

Dept. N-9, U. S. Radium Corp., 535 Pearl Street, New York 7, N. Y.*

☐ Please send me your bulletin describing the Ionotron Static Eliminator.

☐ Attached are details of the static problem(s) I want to eliminate.

NAME_____

TITLE_____

COMPANY_____

CITY_____ ZONE_____ STATE_____

*Manufactured and distributed in Canada and the British Commonwealth by: Eldorado Mining & Refining (1944) Ltd., Ottawa, Ontario, Canada.

miller

PRESSES BUILT FOR PRESSMEN

Miller Automatic Cylinder Presses are designed by practical men who have dirtied their hands on machines and know the pressman's job. These men work cooperatively with able technicians and skilled mechanics who build the Miller Presses. Because of this mechanical know-how, certain fundamental advantages to make the pressman's job less difficult are built into every Miller Press.

The press you operate should have these advantages:

1. Over-all Visibility — feeder, cylinder, delivery, inker and bed all in view while you are standing on the floor.
2. Wide-open Accessibility To Bed And Cylinder — for quick and easy make ready.
3. Compact Design — just two steps to the feeder or delivery from the center of the press.
4. Simple Adjustment — job change-over made easy, due to simplicity and small number of adjustments.
5. Automatic Oiling — inaccessible parts always well lubricated.
6. Patented 3 Speed Slowdown Delivery — assuring accurate sheet alignment and ability to handle wider range of stock.
7. Controlled Sheet Feeder — simple — no tapes, balls, wheels or rollers to adjust.

All Miller Presses have these seven fundamental advantages. May we send you literature?

HE TRIPPED HIS LUNCH AND REVOLUTIONIZED PRINTING

ADAM SPEARS was a London pressman at the turn of the 19th Century. He, together with many other "Adam Spears," made a discovery, a wonderful discovery which revolutionized printing.

It happened in about 1804 during the midday meal hour. Spears accidentally spilled his bottle of molasses against a newly-cleaned ink ball. To clean it again would take time. Instead, he returned to his job using the molasses covered ball to ink with. He soon discovered that proofs from the form on which he had used the soiled inking ball were cleaner, sharper, better.

So he tinkered more. And when the printing of that day began to take on a cleaner, better look, it was because Adam Spears had tinkered with an idea of progress.

For over one hundred years, Sam'l Bingham's Son Mfg. Co. has kept alive the spirit of progress that Adam Spears initiated. They have continually met the complex challenges of the modern age; and they will continue to provide the modern printer with the "right roller at the right time."

THERE'S A FACTORY NEAR YOU:

ATLANTA 3 · CHICAGO 5 · CLEVELAND 14 · DALLAS 1 · DES MOINES 2 · DETROIT 10 · HOUSTON 6 · INDIANAPOLIS 2

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS
LITHO-OFFSET ROLLERS

KALAMAZOO 12 · KANSAS CITY 6 · MINNEAPOLIS 15 · NASHVILLE 3 · OKLAHOMA CITY 6 · PITTSBURGH 3 · ST. LOUIS 2 · SPRINGFIELD, O.

OVER ONE HUNDRED YEARS OF ROLLER MAKING

PRINTING EQUIPMENT *Engineer*

Volume 76 Number 2

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

PRINTING EQUIPMENT Engineer, Published monthly at 1276 West Third St., Cleveland 13, Ohio, Copyright 1948 by Willsea Publishing Co.

EDITORIAL STAFF

MacD. SINCLAIR, *Editor*

DR. R. R. VOORHEES
Field Editor

ADAM HENRI REISER
Associate Editor

BUSINESS STAFF

DON WILL, *Publisher*

William L. Osborn, Eastern Manager, 1728 Grand Central Terminal, New York 17, N. Y. Phone: MUrray Hill 7-2650.

Everett Bloomster, Midwest Manager, 232 East Erie St., Chicago 11, Ill. Phone: SUPerior 2444.

Robert C. Craig, West Coast Representative, 601 S. Vermont St., Los Angeles 5, Calif. Phone: FAirfax 1363.

Subscription price per year, $3.50 in advance in U.S.A. Single copy current issues, 35c; feature issues $1 per copy; December Equipment and Supplies Catalog Issue $2 per copy in United States, $2.50 outside of United States. (U. S. currency). Subscriptions in foreign countries $4.50 (U. S. currency) in advance. Canadian printing plant mechanical and production executives receiving Printing Equipment Engineer under CCA regulations will be charged $1 postage per year in advance to cover additional postage to Canada.

Member Circulation CCA Controlled Audit

Printed in U. S. A.

LEADING ARTICLES FOR MAY 1948

Better Light for Viewing Color in the Pressroom on Night Shift 23
By WILLIAM C. STONE and ANDREW BALIKA

Alternative Methods Discussed at PNPA Conference 26
By Staff Writer

Rotogravure Series—II:

An Outline of Methods Used in Producing Rotogravure Cylinders 27
By ALLEN C. BLACK

Equipment and Supplies 31
Plate Depth Microscope, 31
All-Steel Gauges, 31
Motor Control Center, 31
To Display First Presses, 31
Complete Press Units Delivered to New York *Times*, 32
Counting Electrically and Photo-Electrically, 32
Self-Contained and Portable Dust Collector, 32
D.S.J. Vari-Typer, 33
Protecto-Plate Prevents Engraving Damage, 33
Intertype Matrix Faces, 33

Wiping Cloths No Problem in Chicago Printing Plant 34
By H. A. GERLACH

Poster Stamp Contest Winner . 34

Brunak—Anti-Oxidation Surface Treatment for Aluminum Offset Plates 36
By MICHAEL BRUNO and PAUL J. HARTSUCH

Collotype—Vagaries of Process Explained 38
Reported by A. G. FEGERT

Conference Date Box 42

Patents for Graphic Arts Field 43

Books Received:
Directories for Publicity Men, 56
Sixth Annual Keepsake (Maple Press), 56

INDUSTRIAL ELECTRONICS MAINTENANCE

by C. A. ROETGER

An elementary explanation of the elementals of electronic circuits and devices, many of which are adaptable to the production operation of equipment. Among these are motor drives and controls, relays and measuring circuits, regulators, servo systems and automatic machinery controls, including electronic heating of various kinds.

The book: Size, 5½ in. by 8¼ in. Bound in blue crash cloth, gold stamped titles. Consists of 190 pages. Well illustrated.

Price, $3.50 per copy plus 25c postage and handling charge. Please send cash with order.

PRINTING EQUIPMENT *Engineer*
1276 WEST THIRD STREET
CLEVELAND 13, OHIO

THROUGHOUT THE *Graphic Arts* When You Need Heat, You Need GAS

Throughout the fields of printing and publishing, and in all the related phases of the graphic arts, GAS and modern Gas Equipment perform the myriad heating tasks so vital to datelines and deadlines.

Behind the scenes in newspaper plants, magazine printing establishments, commercial and specialty houses, book binderies, the productive flames of GAS serve efficiently and economically in heating operations such as:

- **Ink Drying**
- **Wax Melting**
- **Stereotype Production**
- **Paper Curing**
- **Embossing**
- **Type Metal Melting**

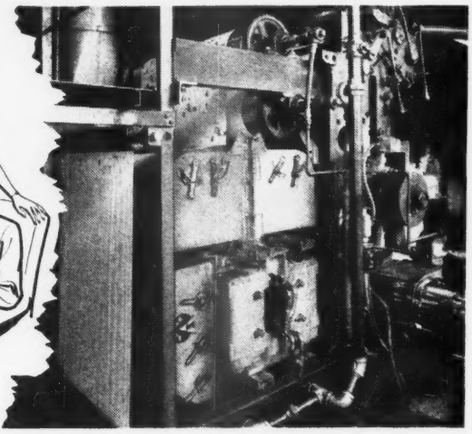
But these are not the only possible GAS applications in the graphic arts industry. In fact, GAS is the ideal fuel for all types of heating operations because modern Gas Equipment is so flexible, time-saving and labor-saving.

In your modernization planning there's a definite place for GAS and modern Gas Equipment—and that's where your local Gas Company Representative can be very helpful.

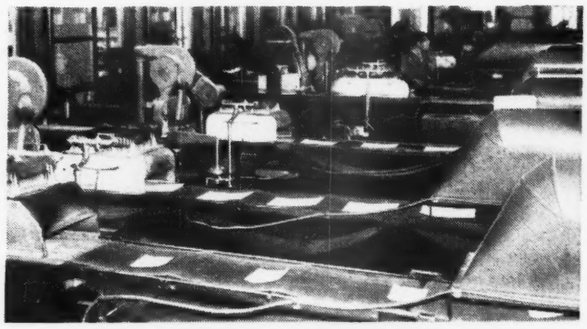
AMERICAN GAS ASSOCIATION
420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

MORE AND MORE...
THE TREND IS TO GAS
FOR ALL INDUSTRIAL HEATING

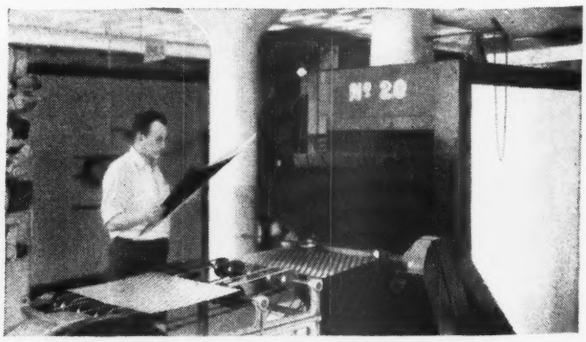
In the modern plant of a great southern newspaper this stereotype machine is always ready for action because it is Gas-fired and automatically controlled.



Mounted right in the press, this Gas-fired ink-drying unit has increased production and increased plate life in a specialty lithographing plant.



Fast drying at high temperatures is essential to the production-line processing of embossed printing—Gas-fired equipment provides the necessary heat for polymerization.



One of the largest manufacturers of closures uses this specially-designed tunnel dryer for drying of lithography on tin-plate.

LUDLOW

offers to your composing room the ideal method of straight line production of display and job composition, gathered in lines of matrices direct from copy, and cast in sluglines direct from hot metal, ready to place in the form . . . Ludlow typefaces afford a wide selection of traditional and modern styles and varieties, from delicate italics and scripts to the distinctive modern faces demanded by discriminating buyers of printing and advertising . . . Ludlow composition is provided in unlimited quantity, assuring no delays because of type shortages . . . Ludlow ruleform matrices have revolutionized this type of composition, and together with a variety of Ludlow lining typefaces, have made its production most profitable . . . Ludlow repeat-casting permits the full utilization of multiple form economies, reducing pressroom handling, and avoiding electrotyping delays and expense . . . Ludlow all-slug composition expedites makeup and lockup, providing a solid, square form that assures accurate press register . . . New Ludlow sluglines with low or high quads reduce press makeready and running time, and avoid the worries of type breakage and press workups . . . Ludlow simplicity of design and mechanism assures trouble-free operation and continuous production at minimum upkeep cost . . . The experience of hundreds of well-satisfied users over the years only confirms these and other Ludlow advantages that you should consider for your composing room.

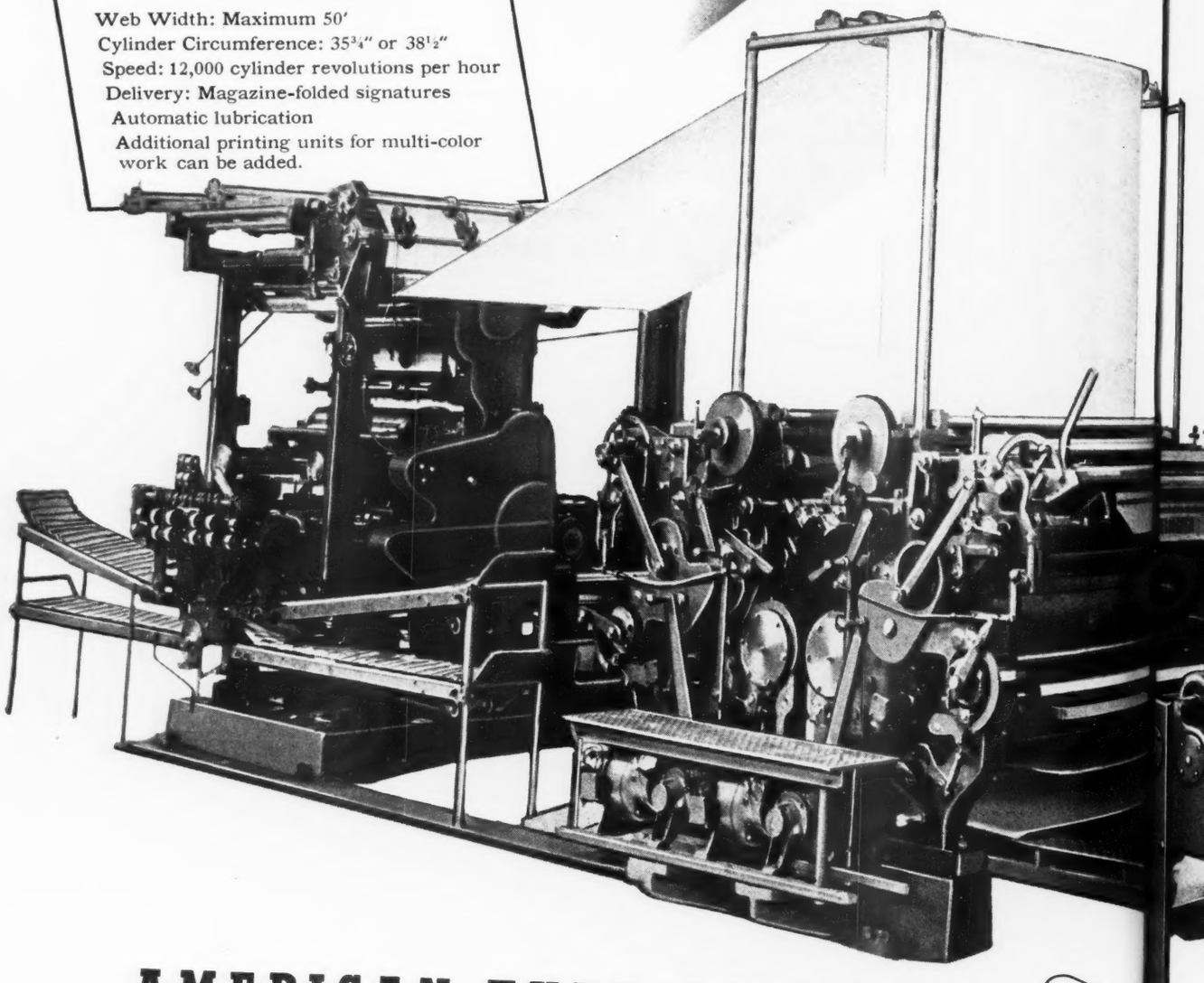
LUDLOW TYPOGRAPH COMPANY
2032 Clybourn Avenue, Chicago 14, Illinois

This press has a single perfecting printing unit with magazine folder, producing 8, 16, or 32-page signatures. It was especially designed to print one color each side for:

TELEPHONE BOOKS
DICTIONARIES
DIRECTORIES
JUVENILES
MAGAZINES
CATALOGS, ETC.

Specifications

Web Width: Maximum 50′
Cylinder Circumference: 35¾″ or 38½″
Speed: 12,000 cylinder revolutions per hour
Delivery: Magazine-folded signatures
Automatic lubrication
Additional printing units for multi-color work can be added.



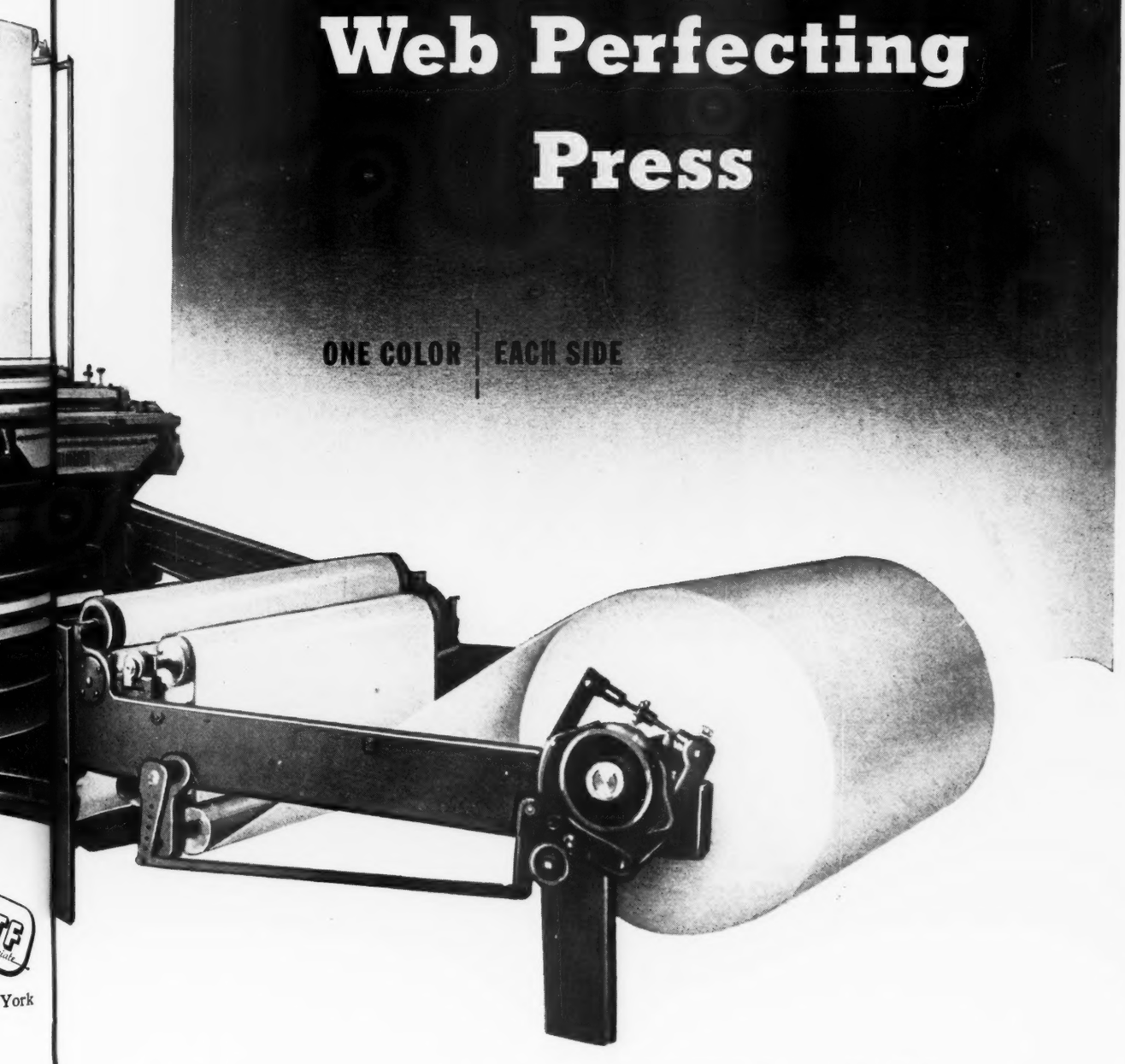
AMERICAN TYPE FOUNDERS

WEBENDORFER DIVISION 2 South Street, Mount Vernon, New York

ATF-Webendorfer

Book and Magazine Web Perfecting Press

ONE COLOR | EACH SIDE

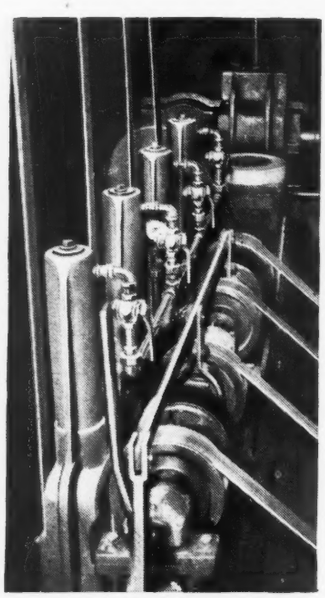


York

GENTLE AS AIR ITSELF

pneumatic tension uses AIR to feed paper (in rolls)

because *only* AIR-pressure can act so softly... yet so fast



Individual air-pistons control each belt . . . compensate instantly for all variations, even in the web itself.

When you equip your new or existing reels with Wood *pneumatic* tensions—you put AIR to work . . . *gentle, resilient* AIR . . . to maintain *constant* tension. Simply select the tension you want—instant-acting AIR pressure *keeps it there* throughout the run, even when making splices. And if you need to use the Red Button Stop, that same AIR pressure instantly surges against the roll in an automatic braking-action. The full Wood system of paper feeding includes Automatic Autopasters, Reels, and *Pneumatic* Tensions. Write for illustrated brochures. Wood Newspaper Machinery Corporation, Plainfield, N. J. Executive Offices, 501 Fifth Avenue, New York 17, N. Y.

IF IT'S Wood IT'S GOOD

pneumatic tensions
with fixed belts for newsprint
with running-belts for
delicate stock and paper converting

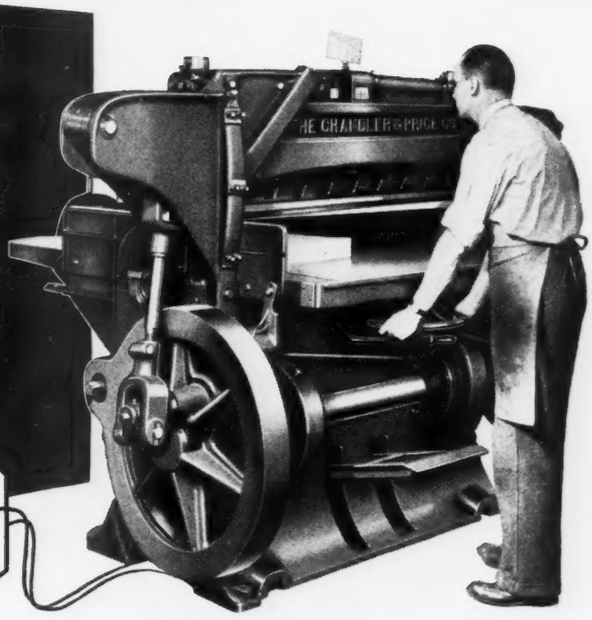
Get these Paper-Cutting Advantages with

CHANDLER & PRICE

AUTOMATIC CUTTERS

39" 44" 50"

Available for Prompt Delivery



Two things are mighty important in the paper cutter you want today—*prompt delivery*, and a cutter with a *reputation for dependable performance and long life*. Chandler & Price automatic cutters give you *both*.

These cutters also provide the four things most wanted in a paper cutter: (1) Accurate Cutting; (2) Speed; (3) Convenient Operation; (4) Freedom from Mechanical Troubles.

1. Accurate Cutting—A solid one-piece casting provides a rigid vibrationless bed . . . no warping or twisting under heavy cuts . . . heavy ribs on the underside prevent springing under heavy cuts . . . knife is *pulled*, not pushed, avoiding knife chatter and providing smooth even cuts. Simultaneous use of both hands is required to start knife stroke. Automatic stop so that cutter absolutely cannot repeat!

The back gauge is always rigid when in locked position: jogging of heavy stock against it cannot make it get "out of square" with the knife.

2. Speed—In paper cutting, speed depends not only on *cutter* speed but also on *control* speed. C&P Automatic Cutters have all three controls—locking lever, back-gauge handwheel, and cutter-starting levers—grouped right in front. Lost motion is eliminated. Operator works freely, easily, and at maximum efficiency. A short quick push on a lever at the operator's left hand releases the back gauge . . . a spin on the ball-bearing handwheel shoots the back gauge along the table to the wanted position. A short pull on the locking lever wedges the back gauge immovably. Overhead measuring tape has big, easy-to-read figures.

3. Convenient Operation—Additional conveniences include: three-part back gauge that can be set to cut three dimensions at a single stroke...easily adjusted friction box (controlling binder pressure) located out in the open, with indicator showing pressure applied at all times...knife adjustment with a single wrench, drawbar at either side easily turned to raise or lower knife . . . a sliding panel that opens and closes automatically, as the knife ascends and descends, keeps trimmings from packing in the knife-slot.

4. Freedom from Mechanical Troubles—Continuous tests and many years of use have proved that the C&P clutch takes hold smoothly and positively even after thousands of engagements. When wear occurs after long use, a slight movement of a single lever outside the clutch casing restores action to original efficiency . . . brake is self-adjusting to take up its own wear, and further adjustments are made when needed, by turning a single nut . . . all oiling points readily accessible, with oil leads from important bearings brought out in clusters of oil tubes at either side of cutter.

These and many other advantages which will handle your cutting problems for years ahead are fully described in an 8-page booklet which will be supplied upon request. Write us.

THE CHANDLER & PRICE COMPANY

CLEVELAND, OHIO

★ ***Manufacturers of Printing Machinery for over 60 Years*** ★

The character of fashion illustration may change, but . . .

. . . good printing will always be an asset to good publishing and good salesmanship in print.

You *know* printing ink affects the quality of printed results. It affects the ease with which a paper is read by its readers, and the satisfaction with which it is read by its advertisers.

We make quality news inks, black and colored, for web presses and sheet-fed, rotary presses. It took years to develop our line of web press colors. We spent those years working side by side with men who are doing an outstanding job of printing newscolor successfully today. Let's put this experience to work on your problem.

IPI, Division of Interchemical Corporation, Empire State Bldg., New York 1, N. Y.

There's no better investment than a KELLY

ATF KELLYS have been demonstrating for three decades that they can be depended on to produce 80% of all commercial jobs at a profit. Quick on get-away, low on maintenance cost, steady in production, and consistently high in quality, Kellys are keystones in the modern plant's equipment. Ask your ATF Salesman for production figures on typical jobs, or write to us.

ATF C-KELLY
handles sheet sizes from
7x10 to 17½x22½

ATF KELLY No. 1
handles sheet sizes from
8½x11 to 22x28

ATF KELLY No. 2
handles sheet sizes from
8½x11 to 24x35

American Type Founders

200 Elmora Avenue, Elizabeth B, New Jersey

BRANCHES IN PRINCIPAL CITIES

The GOSS HEADLINER

HIGH SPEED HEAVY DUTY
NEWSPAPER *COLOR* PRESS*

Somewhere along the line, the name of your newspaper is linked with Goss. Maybe your new press is one of several now being installed . . . maybe it's just being shipped . . . perhaps it's on the erecting floor—in the early stages of construction—or on order awaiting production. It may be merely an unidentified desire for better press equipment.

But wherever you stand on the subject of a new press, you can bank on these all-important features when you get a headliner—complete flexibility for color printing . . . continuous feed ink system . . . central station control of ink supply . . . tension plate lock-up . . . pre-loaded bearings . . . "uni-flow" folder with fully enclosed folding mechanism operating in oil . . . folded-edge-forward delivery.

All these features are "exclusively Goss" . . . "faithfully yours".

***For the Medium-Size Daily, it's a Duplex Unitubular, a Goss Unitube, or a Duplex Standard Tubular.**

it's **GOSS** *again*

THE GOSS PRINTING PRESS COMPANY
1535 South Paulina Street, Chicago 8
Duplex Division: Battle Creek, Michigan
GOSS PRINTING PRESS CO., LTD., PRESTON, ENGLAND

When Special Stocks

demand special inks

From book matches to boxes, bread wrappers to metal signs—Daycos are unequaled for waxing, graining, coating and varnishing. Delivering matchless printed work on tricky papers, metals, glass or wood—Dayco's velvety, smooth surface picks up and deposits special inks evenly on letterpress forms or offset plates. The patented, exclusive "tailor-made" construction of Dayco Rollers makes them outlast ordinary rollers four to one, even when working with Hydry, heat set, metallic, fast drying, oil base and other inks. Daycos don't absorb ink pigments, swell out of round or develop high and low spots. Unaffected by oils, moisture or acids—Daycos can *print it for you better, at lower cost per month!* Get the facts from: *Dayton Rubber, Dayton, Ohio.*

dayco

ROLLERS FOR THE PRINTING INDUSTRY

by **Dayton Rubber**

The Originators and Pioneers of Synthetic Rubber Printing and Lithographic Rollers

Leading roller users

"Our finest Litho jobs are produced with IDEALS"

Recognize Recommend and Reorder

"Let me tell you how we cut on roller costs with IDEALS"

"Let's get ready for competition by ordering more IDEALS"

Ideal ROLLERS

For

Offset Presses

★

Rotary Flat-bed or Job Presses

★

Aniline Presses

★

Specialty Printing and Paper Finishing

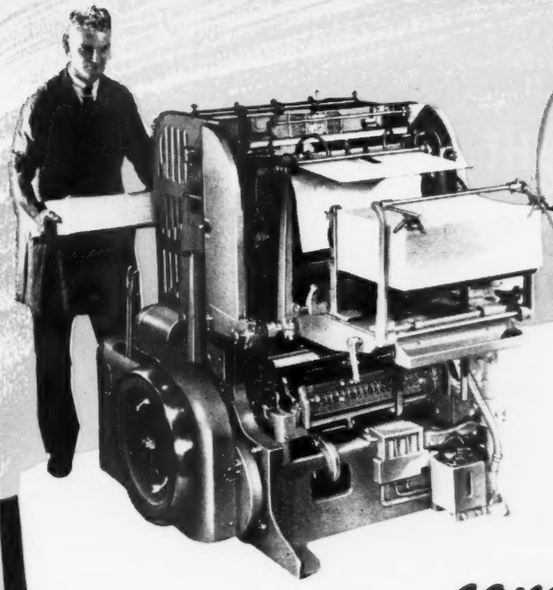
★

"Your rollers should be Ideals"

IDEAL ROLLER & MANUFACTURING COMPANY

☆ **2512 West Twenty-fourth Street, Chicago 8, Illinois** ☆

21-24 Thirty-ninth Avenue, Long Island City 1, New York



THE MIEHLE VERTICAL
MODEL V-50
product of years of development

here's a profit-making

MIEHLE

combination!

FOR A WIDE RANGE OF JOBS

from post cards to 22 x 28 sheets

It will pay you to consider the possibilities of handling a more complete range of work . . . simply by planning your future installations to include the improved Miehle Vertical and the Miehle 29 Letterpress.

With the Vertical, you can bid on large or small runs using sheets from 3¼x5½ up to 14x20, in almost any weight . . . utilizing press speeds ranging from 3000 to 5000 I. P. H. Printing from simple type forms, halftones, and process plates with equal ease, the Vertical has well been called *"the fundamental necessity in every pressroom".*

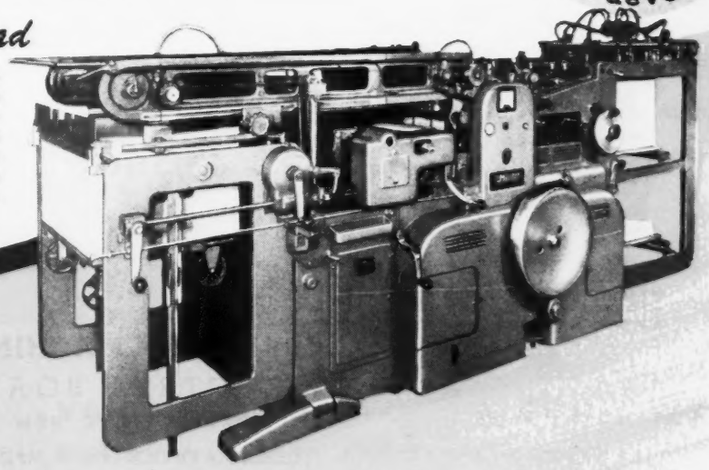
With the Miehle 29, you can easily handle a range of sheet sizes from 8½x11 to 22x28 in practically all stock weights...on a rugged, automatic flat-bed letterpress that operates at conservatively rated speeds from 2500 to 4500 I.P.H....with accurate register and clean, sharp impressions.

Both the Miehle 29 and the Vertical are capable of *actual production that will average closer to top press operating speeds than that of any other presses within their size range.* Here, then, are presses to meet your requirements for faster production of higher quality work with more profit per job . . . today *and* tomorrow. Write for descriptive catalogs.

THE MIEHLE 29 LETTERPRESS
product of years of development

Look to the years ahead

(Below): Scene from the new Miehle full-color sound motion picture "Look to the Years Ahead", which discusses the importance of long-range planning of equipment purchases and demonstrates the Miehle Vertical and 29 Letterpresses. Available for showings to Graphic Arts trade groups.



MIEHLE PRINTING PRESS & MFG. CO.

2011 Hastings Street (14th and Damen) • Chicago 8, Illinois

CHECK and COMPARE

E·B·CO OFFSET PRESS

MORE DEPENDABILITY

- Positive Sheet-by-Sheet Reloading Type Feeder
- Positive Sheet Control from Feeder to Guides
- Pre-Register Slow-Down Guides
- Unique Patented Front Guides
- Patented Pull Side Guide
- Positive Register Detectors
- Three Point Registering Mechanism
- Skeleton Feeding Cylinder

MORE ACCESSIBILITY

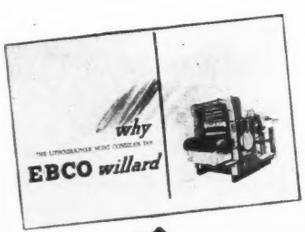
- Efficient Adequate Dampening Motion
- Accessible Sturdy Dampening Rollers
- E.B.CO Plated Water Rollers
- Inker Driven from Main Drive
- Ink Fountain Holds Ample Supply of Ink
- Cylinders Balanced on Tapered Roller Bearings
- Patented Individually Sprung Grippers
- Four Form Rollers of Different Diameters
- Variable Accurate Ink Fountain Easily Cleaned
- Quick Accurate Paper Thickness Setting

MORE EFFICIENCY

- Full Sight Large Diameter Inking Rollers
- Patented Fast Action Plate Clamps
- Rapid Accurate Plate Cylinder Adjustment
- Proper Blanket Tension Easily Applied
- Inbuilt Automatic Clear View Delivery
- Streamlined for Safety
- Scientific Color Finishes
- Easy to Clean Wear Resistant Enamels
- Correctly Designed Heavy Jig Bored Side Frames
- Rugged One Piece Welded Steel Base
- Accuracy in Gear Manufacturing
- Careful Inspection in Manufacturing
- Run-in and Tested at Factory
- Comparatively Easy to Learn to Operate

MORE PROFIT

- "V" Belt Drive from Variable Speed Motor
- Well Guarded but Permits Access to Working Parts
- Reduced Maintenance – Standard Replacement Parts
- Simplified Operating Press Controls
- Up to 6,000 I.P.H.—Plus Less Down-Time



FOR COMPLETE DETAILS SEND FOR BOOKLET. CLIP THIS COUPON TO YOUR LETTERHEAD.

E·B·CO

PRINTING MACHINERY DIVISION
ELECTRIC BOAT COMPANY
445 PARK AVENUE, NEW YORK 22, NEW YORK
CHICAGO OFFICE: 400 W. MADISON ST., CHICAGO 6, ILL.

OUR THANKS to the many firms in the industry who pioneered, tested and PROVED the finer working qualities of the E.B.CO Offset Press.

Choose THE No. 4* VANDERCOOK PROOF PRESS FOR THE FINEST REPRODUCTION PROOFS

- *Power ink distribution.*
- *Changeable inking units reduce washup time and speed up changing colors.*
- *Extra heavy bed and cylinder to insure rigid, permanently accurate impressions.*
- *Micrometer front sheet guides.*
- *Combination foot operated and automatic grippers.*
- *Convenient tray for printed sheets, travels with cylinder.*

Or . . . the No. 4T for Transparent Proofs

This is the machine so widely preferred by typesetters, offset lithographers, rotogravure plants and others who demand top quality proofs for reproduction purposes. Or, they choose the No. 4T Vandercook for proving two sides of transparent material like cellophane or glassine. Both machines represent a wise investment — one that will pay immediate dividends in production, improved quality, increased efficiency, and lower operating costs.

** One of the 14 Vandercook Proof Presses sold exclusively in the U. S. A. by Vandercook & Sons, Inc.*

VANDERCOOK PRE-PRESS EQUIPMENT

VANDERCOOK & SONS, INC.

General Offices—900 North Kilpatrick Avenue, Chicago 51, Illinois
Eastern Branch—216 East 45th Street, New York 17, New York
Western Branch—1151 South Broadway, Los Angeles 15, California

When in Chicago . . . **visit our Display Room, 630 South Dearborn Street, to see the latest Vandercook Equipment in operation.**

DIRECTOMAT

Used by leading plants from coast to coast

Nearly 200 DIRECTOMATS are now being used by leading newspaper and commercial plants throughout the United States and foreign countries. And the number in service is increasing at the fastest rate ever. This unequalled acceptance by leading plants is practical proof that the DIRECTOMAT has important advantages over all other types of mat making equipment. Write today for descriptive literature on the latest model DIRECTOMAT.

LAKE ERIE
ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

LAKE ERIE Engineering Corp.
568 Woodward Avenue
Buffalo 17, N. Y.

Offices in Principal Cities and Foreign Countries

Leading manufacturer of hydraulic presses—all sizes and types—stereotyping...plastics molding...processing...rubber vulcanizing ...metal working...forging...metal extrusion...special purpose.

Quick Reference Guide
26 CHRISTENSEN-DEXTER *Basic Machines for...*

FEEDING – CHRISTENSEN CONTINUOUS STREAM FEEDER – For flat bed, rotary and offset presses and varnishing machines where high speed is essential.

DEXTER CONTINUOUS RELOADING CARDBOARD FEEDER – Will feed cardboard up to forty point thickness, to any make flat bed or rotary press, cutter or creaser, and to certain offset presses, in sheet sizes up to the maximum capacity of press.

CHRISTENSEN PILE SUCTION STREAM FEEDER –For flat bed, rotary and offset presses and varnishing machines.

DEXTER CONTINUOUS RELOADING METAL SHEET FEEDER–Feeds sheets 38 to 24 gauge, in sizes 14 x 18" to 36 x 44"—at speeds up to 80 per minute. Provides press operation uninterrupted by stops for reloading.

GATHERING and INSERTING–

CHRISTENSEN STITCHER FEEDER – for inserting and stitching saddle-bound catalogs and periodicals.

MARTIN ROTARY GATHERER, STITCHER AND COVERER – For gathering signatures of books prior to other binding operations; and for gathering, side-stitching and covering magazines.

TRIMMING – BRACKET SAFETY TRIMMER –For label cutting, booklet trimming, singly or in multiple form – and cutting gang work.

FOLDING – CLEVELAND FOLDING MACHINES –For circulars, greeting cards, booklets singly or in gangs, catalogs, publications, etc. *Seven* models covering every bindery requirement and handling sheets from 3 x 4" to 42 x 62".

DEXTER JOBBING FOLDER, DOUBLE SIXTEEN and QUADRUPLE SIXTEEN FOLDERS – For job work and book folding in sheets from 12x16" to44x58".

VARNISHING – CHRISTENSEN VARNISHING MACHINE–For all types of varnishing jobs.

SORTING – DEXTER SORTING MACHINE– For paper mills. Speeds production and eliminates waste motion in coated paper and bond finishing rooms.

BRONZING – CHRISTENSEN HIGH SPEED BRONZER – For all types of sheet bronzing.

Dexter & Christensen Machines

All Dexter and Christensen Products are sold and serviced by

DEXTER FOLDER COMPANY, General Sales Offices
330 West 42nd Street, NEW YORK 18, N. Y.

DEXTER Machines *are built by Dexter Folder Company of Pearl River, N. Y.*

CHRISTENSEN Machines *are built by Christensen Machine Company at Racine, Wisc.*

For EXCELLENCE

in typography
make-up and presswork

Imperial Serves These Winners in the

18th ANNUAL EXHIBITION OF NEWSPAPER TYPOGRAPHY

•

Winner of Ayer Cup

NEW YORK HERALD TRIBUNE

Runner-Up

OKLAHOMA CITY DAILY OKLAHOMAN

Honorable Mention
Circulation: 10,000 to 50,000

ROCKFORD ILLINOIS REGISTER REPUBLIC
IRON MOUNTAIN MICHIGAN NEWS

Honorable Mention
Circulation less than 10,000

KINGSPORT TENNESSEE NEWS
GOSHEN INDIANA NEWS DEMOCRAT

•

Imperial takes pride in the fact that these six newspapers winning the Francis Wayland Ayer Awards in the 18th Annual Exhibition of Newspaper Typography, depend on Imperial for their Type Metal Service. We recommend this same service to every newspaper plant.

Imperial

IMPERIAL TYPE METAL CO.

Serving the Graphic Arts Industry Only

Philadelphia 34 **New York 7** **Chicago 50**

The quick broun fox

The qwick brown fox

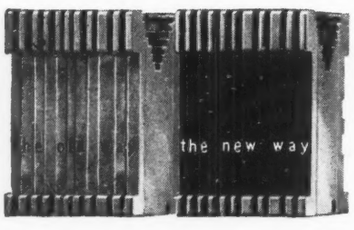
Teh quick brown fox

The quick brown fix

The quick brown fox jumps over the lazy dog's back much more quickly when there's Matrix Contrast Service in the plant.

Considering that at least double time is employed in setting correction lines—as compared with an equal number of lines of original composition—it's easy to figure that the ⅓ reduction of all errors in original composition with Black and White Processed Reference Marks means a substantial increase in each operator's production time. Errors are caught on the spot... *before* the line is cast.

Long known for its Black and White Processed Reference Marks (striking white against a jet black background), Matrix Contrast has introduced another help the operator can't afford to be without—Color-processed Reference Marks. These colors eliminate the possibility of using wrong fonts, for various fonts have their own distinctive color. More than ever before, you'll want the complete story on Matrix Contrast Service. A qualified consultant will be glad to answer any of your questions.



MATRIX CONTRAST CORPORATION, Empire State Building, New York 1, N. Y.—326 W. Madison Street, Chicago 6, Ill.—1105 Trenton Street, Los Angeles 15, Calif.—Sole licensees of the Percy L. Hill Matrix Contrast Patent No. 1,796,023, other patent pending. European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E. C. 1.

Matrix Contrast Service

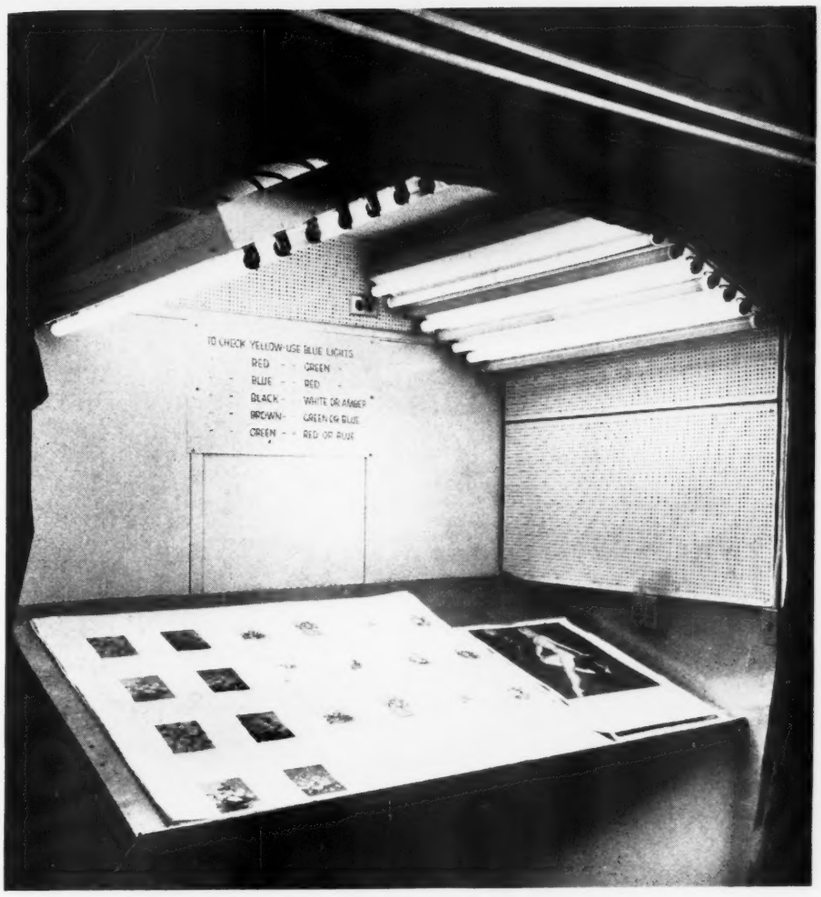


Fig. 1.—Press Inspection Booth at Copifyer Lithograph Corp., Cleveland. Booth is large enough to view a 46 in. by 68 in. press sheet.

Better Light for Viewing Color in the Pressroom on Night Shift

By **WILLIAM C. STONE,** *Production Manager,*

and

ANDREW BALIKA, *Superintendent*
Copifyer Lithograph Corp., Cleveland, O.

"WHAT'S the matter with the night shift—is it blind?" That's what we said when we went through the pressroom one morning. There it was—a whole skid run in yellow—with a nice yellow "wash" on one edge where it shouldn't have been.

We had good lighting on the press inspection table—75 foot candles of 4500 deg. white fluorescent light all over the sheet according to the latest recommendation of the lighting engineers. Definitely the night pressman must have been blind not to see that yellow "wash" on the edge of the sheet.

So we took several sheets and waited till the night shift came in. It was dark outside then, the lights were on over the press table. We laid out the sheets—all prepared to give the pressman a good bawling out for carelessness—but we didn't. *We couldn't see the yellow "wash" either.* It just didn't show up under our inspection lights.

Solving the Problem

Everyone agreed something ought to be done. We had a lot of light for press sheet inspection, but we just couldn't see a yellow "wash". So, as we had done many times before, we took our problem to the engineers at the Lamp Department of the General Electric Co., Nela Park, Cleveland.

An illuminating engineer, E. A. Linsday, was assigned to work on our problem. We told him we wanted a light that would make a yellow halftone press proof appear in gray values the same as the positive did on the camera inspection table. We also wanted a light which would turn the blue proof and the red proof into black and white images.

It was thought that some of the new colored fluorescent tubes might do the trick. We tried illuminating the yellow proof with blue fluorescent tubes, excluding all other light. The yellow appeared much darker but still not a black and white image. We found that the blue fluorescent tube gives out a wide waveband of light. Linsday then suggested that we wrap a blue gelatin filter over the tube which would pass a narrower band of blue light. We were able to get some from a theatrical supply store. One of the blue gelatins brought the yellow proof nearly to a black and white halftone appearance. Mr. Linsday analyzed the color of our inks, and also various colored gelatins on the spectrophotometer at Nela Park.

We soon began getting visual results very close to what we wanted. A blue gelatin filter over the blue fluorescent tube made the yellow printer appear as black and white. A green filter over the green tube turned the red printer a dark brownish black. A red filter over the pink tube turned the blue printer quite dark.

The colored lights also worked with light tints such as pinks, buffs, tans. Under the colored light it was easier to see whether the color strength was equal on both edges of the sheets, because the color was changed to a gray value.

Inspection Unit in Use for a Year

Fig. 1. shows the press inspection booth that we built, which has been in use over a year. Several visitors in our plant have built similar viewing booths and their success has prompted us to make this viewing method available to the Graphic Arts. There are no patents or license fees on the viewer. The fluorescent tubes are standard colors that can be purchased from your local lamp supplier. Standard lamp reflectors suitable for 40w. tubes can be used, or your electrician can wire the sockets and ballasts on plywood, painted flat white for good reflection.

How the Viewer is Used

The pressman inspects his first OK sheet in the viewing booth. This enables him to see more easily if his color is even on both sides of the sheet. He can see if there is any "catchup" or "wash"; if the halftone values are all there in the light tints; if the solids are printing full.

Thereafter, about every half hour during the run, sheets can be inspected to see if the print is sharpening or fattening, or if any "wash" is developing on the edge of the sheet.

(The viewer is not designed to match colors, although colored fluorescent lights have possibilities along these lines.)

Most Useful Tubes

Here are the colored tubes we found most useful in checking press sheets:

© Shaw-Barton, Inc

Fig. 2.—YELLOW PROOF UNDER WHITE LIGHT

© Shaw-Barton, Inc.

Fig. 3.—YELLOW PROOF UNDER BLUE LIGHT

To Check This Printing Color	Use This Color Fluorescent Tube
Yellow	Blue Tube
Red	Green Tube
Blue	Red Tube
Black	4500 deg. White, or Gold
Brown	Green or Blue
Green	Red and/or Blue

It is important to exclude all stray light from the inspection table. Our booth is in the pressroom office. A black curtain hung from the ceiling can be drawn to keep out all stray light.

There is less light intensity under the colored light, so time should be allowed for the pupil of the viewer's eye to expand. After a minute he will see much more detail on the print than he sees right after the white inspection light is turned off.

In the left hand photograph shown in Fig. 2 an attempt is made to show how strongly one's eye sees a yellow proof viewed under *white* light. The image appears weak, and detail is hard to make out.

Fig 3 shows what the eye sees if the yellow proof is viewed under *blue* light. The image is much stronger, and detail is easier to see.

The diagram Fig. 4 shows a suggested arrangement of tubes. We found that for viewing a 46 in. by 68 in. press sheet we needed four each of the blue and pink tubes, and two each of the green, gold and white tubes. The green and gold tubes emit about twice as much light as the pink and blue tubes, so only half as many were used to give the same comparative illumination.

The tubes for each color are spaced out to give even illumination over the inspection table. Follow the lamp manufacturer's directions for wiring. By using two-lamp ballasts you need only half as many ballasts as tubes. One switch is used for each different color of tube, and controls all the lamps of that color. "Instant-start" fluorescent ballasts cost more but avoid the time lost in waiting for the tubes to light. They make it quicker to switch from one color to another.

We found 40 w. tubes satisfactory; 100 w. tubes also come in color and can be used if more light is desired.

Bill of Material

Below is a suggested bill of material with current list prices (April 1948) as furnished by the General Electric Co. This gives an idea of the approximate cost of the fluorescent lamps, and necessary electrical parts if you wish to build your own reflectors:

Quantity	Description	Part No.	List Price Each	List Price Total
4	40 W. Instant-start BLUE Lamps	F40T12/B/IS	$1.25	$5.00
4	40 W. Instant-start PINK Lamps	F40T12/PK/IS	1.25	5.00
2	40 W. Instant-start GREEN Lamps	F40T12/G/IS	1.25	2.50
2	40 W. Instant-start GOLD Lamps	F40T12/GO/IS	1.35	2.70
2	40 W. Instant-start WHITE Lamps	F40T12/45W/IS	1.00	2.00
28	Lamp Holders—White	78X491	.20	5.60
7	Two Lamp Instant-start Ballasts	59G383	9.00	63.00
5	15 Amp. Toggle Switches		.50	2.50

(If regular fluorescent tubes are used (not instant-start) you would need 14 starters FS-4 at 30c each, 7 ballasts 58G483 at $5 each and 14 starter sockets 78X769 at 15c each.)

Gelatin Filters

The colored gelatin to wrap around the fluorescent tubes can be purchased from the Rosco Laboratories, 367 Hudson Ave., Brooklyn 1, N. Y., at 20c per 20 in. by 24 in. sheet. Each sheet will cover two 40 w. lamps. The manufacturer was unable to supply the colored gelatin in 48 in. strips (a 40 w. tube is 48 in. long), so we cut each 20 in. by 24 in. sheet into four pieces 5 in. by 24 in. These were taped end to end to make strips 5 in. by 48 in. which will cover a 48 in. tube with a slight overlap. Clear cellophane Scotch tape was used for taping. In mounting the tubes in the

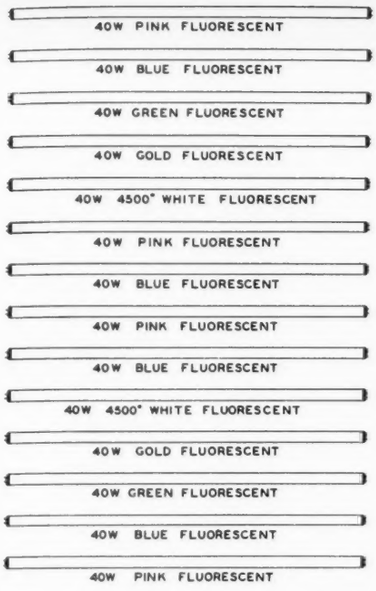


Fig. 4.—DIAGRAM SHOWING POSITION OF COLORED TUBES

reflector put the long taped seam to the back, away from the viewing side.

Of the colored gelatin tried the following worked the best:

Lamp Color	Rosco Gelatin Number
Blue Tube	No. 37 Urban Blue
Pink Tube	No. 15 Light Red
Green Tube	No. 40 Medium Green
Gold Tube	No. 12 Amber

No filter is necessary for the 4500 deg. white tube. This is used as normal illumination in the booth when the viewer wants the colors to appear natural.

Gelatin filters are fragile and with age become brittle from the heat of the lamp. It would be advisable to order extra sheets for future replacement. The colored gelatin did not appear to fade perceptably, and we had no lamp replacement in the first year of operation in our plant. We understand the colors of the fluorescent tubes are constant for the normal lamp life.

Spectral Curves

The spectral curves of different colored fluorescent lamps are published in General Electric Lamp Bulletin LD-1. In the line drawing shown in Fig. 5 are the spectral curves of the blue, green and pink fluorescent tubes after they have been covered by the colored gelatin filters mentioned above. Those technically inclined will note that the above curves have a much sharper cutoff and pass a much narrower waveband of colored light than do the bare tubes. This sharp cutoff and the absence of color overlap apparently contributes to the better seeing of color which we achieved.

Summary

Colored fluorescent lamps, properly filtered, improve the seeing and inspection of color in the pressroom, particularly at night. An inspection booth utilizing these lamps can be constructed at relatively low cost. There are no license fees or royalties to be paid. The lighting system described should be useful to any method of printing in color.

Inquiries for further technical information regarding the fluorescent lamps may be addressed to E. A. Linsday, Illuminating Engineer, Lamp Dept., General Electric Co., Nela Park, Cleveland, O.

ATF Appointments

W. A. Wells has been appointed salesman for American Type Founders Sales Corporation at its Columbus (O.) office, 83 South High St. . . . Victor R. Shipp has been appointed salesman for ATF's western Minnesota and North Dakota territory, it has been announced by Harry W. Detlef, manager of ATF's Minneapolis branch . . . W. J. Taylor has been appointed manager of ATF's Baltimore (Md.) office, announces Robert G. Marquardt, vice president. Taylor succeeds Otto E. Zimmer who is retiring after 55 years in the Graphic Arts field.

Harold R. Thompson has joined the sales staff of American Type Founders Sales Corporation in Omaha, Neb., it was announced by William F. Dallinger, manager of the company's Des Moines branch. Mr. Thompson has been an instructor in printing at Father Flanagan's Boystown, and previously was with a printing and lithographing firm in Omaha. He makes his home in Omaha. The ATF Omaha office is at 320 WOW Bldg., 14th and Farnham Sts.

H. R. Thompson joins ATF's Omaha (Neb.) sales staff.

Walfrid Williamson has been promoted from the sales staff of American Type Founders Sales Corporation's Chicago branch to the managership of the company's office in Portland, Ore., it was announced by Robert G. Marquardt, vice president. Mr. Williamson is the son of a Chicago printer and has been with ATF 11 years. He succeeds Richard W. Hardy, former manager of the Portland branch, who has been appointed manager of the ATF Seattle office. The Portland office is at 417 S.W. Oak St.

W. Williamson now manages ATF's Portland (Ore.) office.

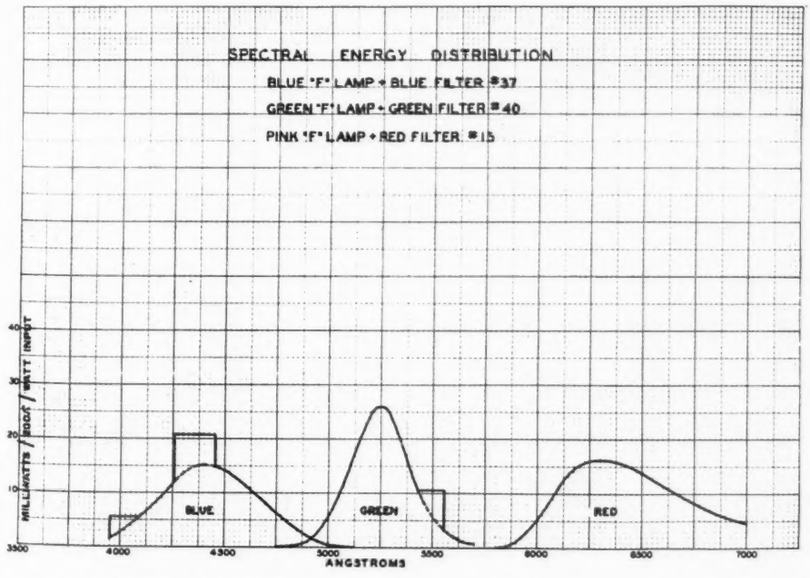


Fig. 5.—SPECTRAL CURVE—Color of Light Produced by Fluorescent Lamp Covered by Gelatin Filters.

Something in Common at PNPA Mechanical Conference—(Left to right seated): J. Harold Mintun, Production Manager, Pittsburgh *Post-Gazette;* John H. Biddle, Publisher, Huntingdon (Pa.) *Daily News* and President of the Pennsylvania Newspaper Publishers' Association; Edward O. Davies, Mechanical Supt., Harrisburg (Pa.) *Patriot and Evening News*. (Standing, left to right): J. Russell Barley, Mechanical Dept., Aliquippa (Pa.) *Times* and the Beaver Valley (Pa.) *Times;* J. L. Carley, Branch Manager, Ralph C. Coxhead Corp., Philadelphia; Jack Kelt, Mallinckrodt Chemical Co., New York Branch.

Alternative Methods—

for type composition and photo-engraving demonstrated and explained at PNPA Mechanical Conference — One paper offers discount for early ad copy

By STAFF WRITER

THAT the regional mechanical conference for newspaper production and mechanical executives is the outstanding method of exchanging ideas, expressing views, and development of better know-how in printing was apparent from the expressions of more than 350 who attended the recent conference in Philadelphia (April 9-10) under the sponsorship of the Pennsylvania Newspaper Publishers' Association.

Attendance was largely made up of mechanical superintendents, and department heads of composing, press, stereotype and engraving departments, from Pennsylvania, Delaware and nearby New Jersey, with a sprinkling from New York, Maryland, Virginia and West Virginia. Nearly 50 newspaper publishers showed up for the first public demonstration of the Fairchild Engraver, the other exhibits including the Vari-Typer, and the Kellogg Keyboard. A portion of the program was devoted to new processes.

The first session was opened with a welcome from PNPA President, John H. Biddle, publisher of the Huntingdon (Pa.) *Daily News*, Edward O. Davies, Mechanical Superintendent of the Harrisburg (Pa.) *Patriot* and *Evening News*, and Conference chairman, then welcomed the delegates, commenting: "Every trade journal cries to the high heavens about the increased mechanical costs, but you know and I know that only management can do anything about those costs. We must streamline our present production methods, while at the same time be constantly seeking and ever alert for better and cheaper methods. We must eliminate all the abuses that have crept in and apparently become a permanent fixture in our production. To do this we must have the confidence, encouragement and wholehearted support of management. It can be done, it must be done—but only with the support and cooperation of every department. We can point the way but it is definitely management's responsibility."

Shape of Halftone Dot

Opening session, devoted to photo-engraving topics, was in charge of N. DeWitt Ray, a practical engraver and co-publisher of the Indiana (Pa.) *Evening Gazette*, with the assistance of David L. Miller, publisher of the Tamaqua (Pa.) *Courier*. These two representatives of smaller-city dailies, directed the session along "shop-talk" lines. Feature of this Friday morning session, attended by more than 200 newspapermen and by more than 30 representatives of the Manufacturing Photo-Engravers' Association (Affiliate of Printing Industry of Philadelphia) were talks by Jack Kelt, Mallinckrodt Chemical Co.'s New York office, and a comparison of cuts made by PNPA member papers and their commercial engraving plants. Kelt told how the etching of a relief printing plate is one of the major steps in photo-engraving. He described the common problems that a newspaper photo-engraver meets, and emphasized that "the shape of the halftone dot must be a pyramid or wedge formation and the construction should have a wide base tapering to a point, but not a pinpoint, in the highlight area."

Halftone Comparison Sheet

Stanley Myers, Assistant Mechanical Superintendent of the Philadelphia *Bulletin*, with the aid of a panel comprising Mr. Kelt; Harry M. Crosby, Eastern Graphic Arts Supply Co., New York; Richard E. Rentz, co-publisher New Castle (Pa.) *News*, and J. R. Cubbison, photo-engraving manager, Sharon (Pa.) *Herald*, discussed the quality of engravings used in newspapers. The guide used

(*Continued on Page 46*)

Cut of Ted Serrill, PNPA Associate Manager, in charge of industrial relations, from picture taken on floor of Pennsylvania Newspaper Publishers' Association mechanical conference, Philadelphia, April 9 and 10. Cut was made in 3½ min. on a Fairchild Engraver being demonstrated to the conferees. This was the first public demonstration of the Engraving machine, produced by the Fairchild Camera and Instrument Corp.

An Outline of Methods Used in Producing Rotogravure Cylinders

Differences in Photo-Mechanical Methods — Retouching Negatives and Positives — Color Work, Laying-Down and Etching Explained

By ALLEN C. BLACK* (Above)

*Superintendent Gravure Preparatory Dept., Crowell-Collier Pub. Co., Springfield, Ohio.

II. INTRODUCTION

IT IS the intention of the writer that this article deal strictly with the procedure for producing rotogravure printing cylinders and not as a comparison between rotogravure and any other form of printing. In order that the reader may understand better the principles of the rotogravure printing process it should be noted that rotogravure is intaglio printing. In other words, the screen is etched below the surface of the printing cylinder, the entire face of the cylinder inked and the surface wiped clean by a steel blade, thereby allowing the ink to remain only in the depressions. Upon contact with the paper the ink is drawn out of the depression by suction and capillary action, and is deposited on the printing paper.

Two processes in common use in producing rotogravure cylinders are conventional gravure which utilizes a screen having intersective transparent lines with black squares between, and the so-called Dultgen process which utilizes a halftone screen (intersecting black lines with transparent windows). The conventional gravure cylinder is formed with pockets of the same area but varying depth, while the Dultgen type cylinder has pockets that vary both in area and depth.

To illustrate the difference between the conventional or cross-line gravure screen and the screen used in the Dultgen process, two diagrams are shown. Fig. 1 illustrates the conventional or cross-line Gravure screen, and Fig. 2 shows the screen used in the Dultgen method.

Since the rotogravure process is photographic, it has a marked ability to reproduce the original artwork as the camera views it, thus making it possible to reproduce soft gradations of tone and color, as well as sharp detail, depending on the subject to be reproduced. Type matter can be reproduced from hand lettering, photographic line work, or black and white type proofs.

Practically all mediums of artwork, such as oil-paintings, watercolors, pen and ink drawings, carbros, etc., are suitable for rotogravure reproduction. Transparencies, such as kodachromes, can also be reproduced successfully but, due to the fact that they transmit light, reproduction calls for a different technique in photography from that used in reproducing oil paintings or water colors, which reflect light.

Rotogravure Negatives

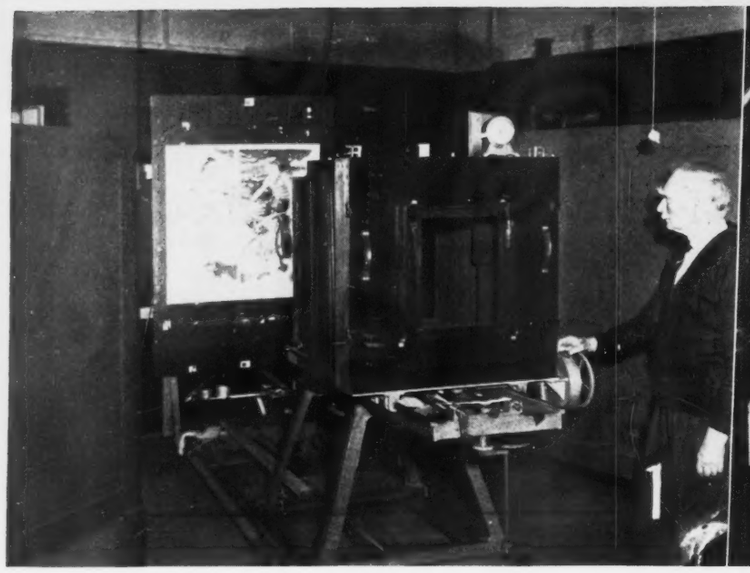
THE first step in the process for reproduction in rotogravure is photography. Before the copy or artwork is photographed register marks, tone scales, and color swatches are attached to the copy to facilitate the handling of the negatives during the process. The register marks are used to check the various color negatives for fit. The tone scales are used to take measurements on the densitometer[1] to assure proper balance between the color negatives, and the color swatch is used to identify the negative and also as a check to assure proper transmission of color.

Many new measuring instruments are available today to check standard quality. This quality must be maintained throughout the process where so many

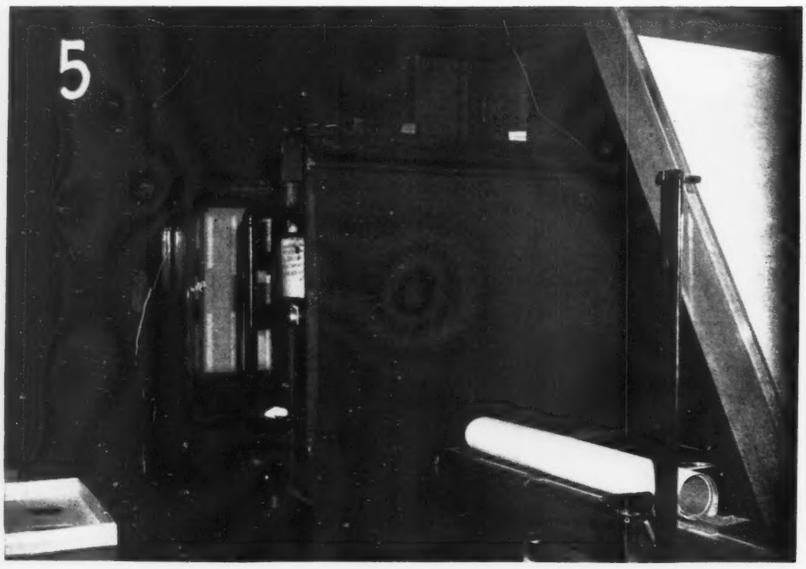
[1]A densitometer is an instrument for measuring the density of all tones in negatives and positives usually by means of a photo-electric cell.

EDITOR'S NOTE:

IN THIS fine discussion about the principles of rotogravure cylinder making, Mr. Black writes primarily from the standpoint of magazine rotogravure engraving technique. The principles employed in magazine cylinder making are similar to those employed for other rotogravure work. There are variations, of course, for application according to the division of the industry in which the cylinders are intended to be used. It is not the intention of Printing Equipment Engineer *to mention magazine, commercial and newspaper supplement printing in the same breath—each has its distinctive procedures. It might be remarked in passing, however, that those most intimately associated with the process are the first to admit the necessity for research to transform some of its operations from an art to an exact science.*



Views in Rotogravure Preparatory Department, Crowell-Collier Pub. Co., Springfield, O.



1.—One of the cameras on which color separation negatives are made. To properly separate the colors photographically for the various negatives, the copy is photographed through a number of filters separately for each color. The filter is a colored gelatin slide which is placed either at the front or back of the camera lens.

2.—General view in photo department. Here is done the photographic work for monotone and color negatives.

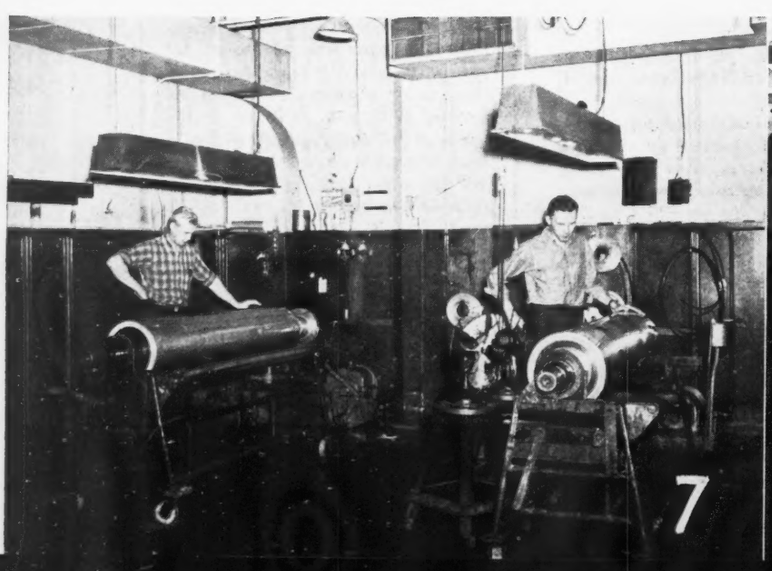
3.—A retoucher at work on a positive. The utility of the retoucher will be evident when it is explained that in all photo-mechanical reproduction there is a loss of brilliance in the high-lights and loss of depth in the shadows. For this reason, positives (negatives, too) are deliberately corrected for detail and tone value. The retoucher has before him the original art copy with which he compares the positive or negative which he is correcting with dyes or reducing solutions (or, in some cases, with a pencil) with which he increases or decreases the tone values in the negative or positive.

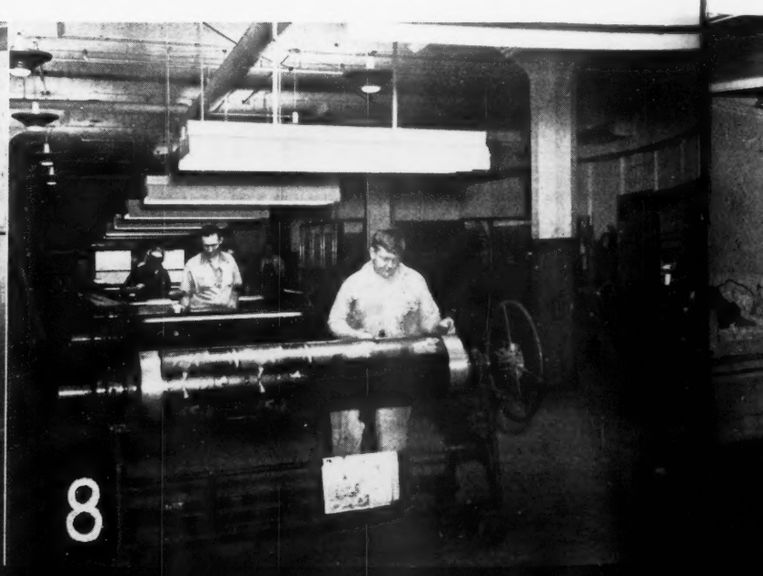
4.—View in positive layout department. In this department the retouched positives together with type units are assembled over the underneath-illuminated layout table. The various assembled positive units are then ready to be sent to the etching department.

5.—View of a vacuum frame which is used for printing down the positives upon the carbon tissue. This operation is explained in Figs. 1 and 2. During the printing-down operation all air is withdrawn from the interior of the frame to compel complete contact of the positive with the carbon tissue.

6.—View of several laydown machines. These are used to lay down the previously exposed carbon tissue upon the copper-faced printing cylinders in exact register position. The carbon tissue is squeegeed with a roller and adheres tightly to the cylinder.

7.—After the carbon tissue has been laid on the cylinders as explained in picture 6, the exposed carbon tissue on the cylinder is developed





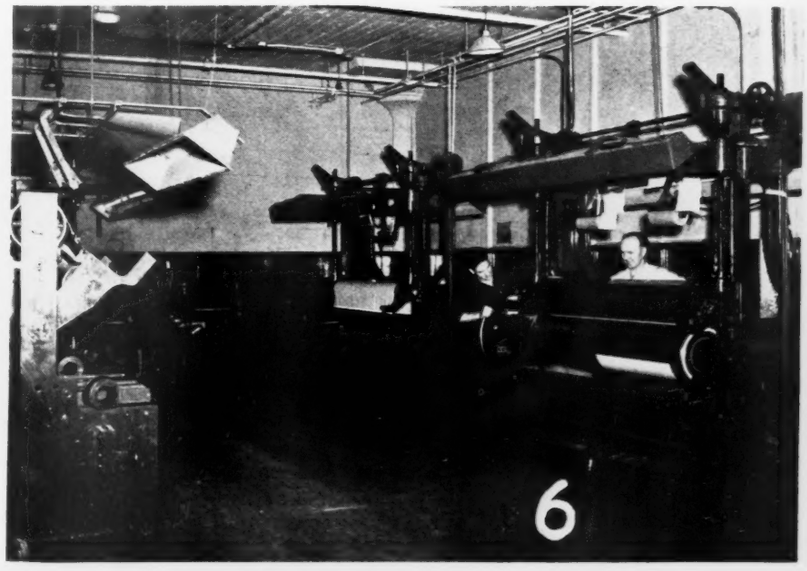
Here are undertaken all operations used in producing the printing cylinders from which the company prints more than 1 million magazines per day.

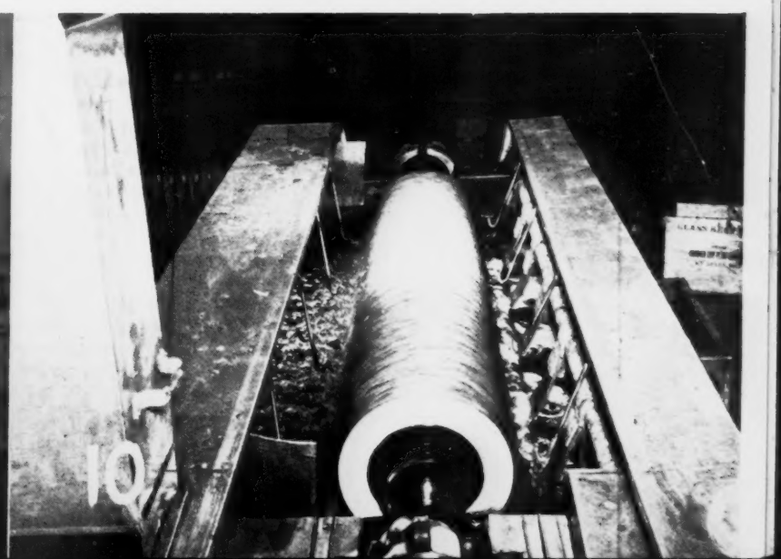
previous to the staging and etching operations. Development is performed by revolving the cylinder in a pan of water. Development is started with warm water, the temperature of which is increased until the paper backing on the gelatin becomes loose. The paper backing is then stripped off leaving only the gelatin coating on the cylinder. Development with the water continues. As has been explained previously, light hardens the sensitized gelatin according to the density of the tone in the picture. Thus, the unhardened gelatin is washed away, leaving a hard gelatin film on the cylinder. The gelatin is thickest in the highlights where light has hardened it to the greatest depth (and where ink must not appear in the finished printing). The gelatin in the deep shadows is so thin that the copper is practically bare.

8.—Here the operator is staging a fully developed cylinder with acid-resisting paint prior to etching the cylinder. In other words, he coats all portions of the cylinder which represent no-printing areas, that is, margins between the pages, so the acid will not etch these surfaces. After the cylinder has been staged, it is taken to the etching department (not shown among these pictures). The cylinder is revolved in a tray containing perchloride of iron which is the etching agent. After the etching operation has been completed, the staging ink is removed. The cylinder is now ready to be sent to the proving press in another department.

9.—View in "proof" room. After a proof has been taken of a monotone cylinder or from a set of four-color cylinders, it is compared with the original art work. This room is specially lighted with fluorescent lamps for this purpose. Note the proofs in folded signatures on the table and the original art work resting on the rail against the wall. If corrections are required they are indicated on the proof. The cylinder, or cylinders, are then removed from the proof press to permit making correction before reproving.

10.—View of cylinder being copper plated electrolytically in a tank so that the finished surface will be between 0.005 in. and 0.006 in. thick. During the plating operation the cylinder is continuously motor-driven.





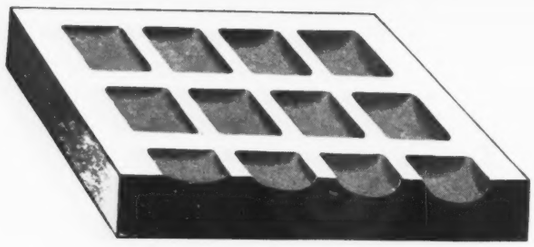


Fig. 1.* —Greatly expanded cross sectional representation of rotogravure (intaglio) printing plate in which the conventional cross-line screen has been used. In the conventional cross-line screen, there are 175 lines to the inch. In the Crowell-Collier plant this screen is used for monotone gravure printing. Each microscopic cell in the printing surface is of the same size but the depth of each cell varies with the depth of tone in the picture from which the plate (cylinder) was made. The varying depths of the cells produce the variations in tone. The highlight areas are shallowest, hold the least amount of ink and print the lightest. The shadow or deeptone area cells hold the greatest amount of ink, hence print heavier.

In monotone rotogravure an image of the cross-line screen is printed on the sensitized carbon tissue. The screen subsequently forms the ink cells on the printing cylinder and supports the doctor blade which removes the ink from the non-printing areas of the surface of the cylinder. To print the image of the screen on the carbon tissue, an opaque glass plate which is cross-divided by thousands of infinitely fine transparent lines (175 to the inch) is interposed between a strong light and the carbon tissue. This exposes the sensitized gelatin behind each transparent screen line. The next step is to interpose between the light and the same carbon tissue the continuous tone transparent photographic positive. This exposes the sensitized gelatin to the varying light and dark areas of the picture.

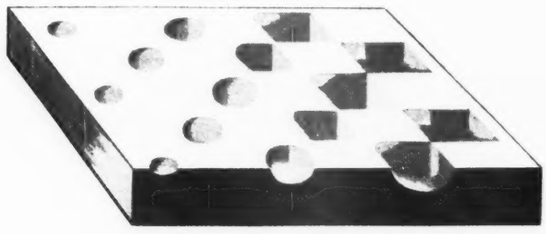
*Some of the phraseology used in these explanatory captions has been adapted from *New Wings for Publishing*, published by The Crowell-Collier Pub. Co.

Fig. 2.—This drawing represents a section of the surface of a rotogravure (intaglio) printing plate (cylinder) in which the Dultgen screen has been used. It will be noticed that the dots (unlike the conventional cross-rule screen) vary in size as well as in depth. The large dots are also deeper to produce shadow areas in the picture. The highlight dots are smallest and shallowest and consequently hold less ink than either the middletone or shadow dots (cells).

In the Dultgen process, the cross-line screen explained in Fig. 1 is not used to screen the carbon tissue. Instead, the light is passed through two photographic positives of the original picture. First the light is passed through the photographic positive which has been screened with the photo-engraver's screen into opaque dots of varying size; and second, the light is passed onto the carbon tissue through the continuous tone photographic positive.

If only the screened positive were to be etched on the surface of the printing cylinder, the printed picture would lack the distinct variation of gravure.

It is to give each dot its proper tonal depth that the image of the continuous tone positive is imposed on the image of the screened positive. Through the double exposure of the screened positive and the continuous tone positive the carbon tissue is exposed to the varying tones of the original picture so that the vertical characteristics of gravure etching are added to the dots. Thus, when the dots are etched into the cylinder they are not only variable in diameter but are variable in depth as well.



different subjects or pages are to be printed on one cylinder at the same time.

When the original artwork is properly prepared it is photographed for continuous tone negatives. These negatives are not screened as in some of the other platemaking methods. The introduction of the screen comes at a later point in the process. For monotone copy one continuous tone negative is made.

When two or more colors appear in the art, separate continuous tone negatives must be made for each printing color. One negative for the yellow, one for the red, one for the blue, and one for the black printer, which is often called the "key plate".

To properly separate the colors for the various "printers" (negatives) the art is photographed through a number of filters, one at a time. The filter is a piece of colored gelatin which is placed either in front or back of the camera lens, and sometimes in a special slot cut in the lens barrel. Thus the filter can be placed between the lens elements to make sure no other color light will reach the color-sensitive plate than that intended.

The filters used are different colors, depending on the colors in the copy, and the effect produced by their use is to absorb certain colors and to allow others to photograph in full strength on the sensitive plate and to obtain the proper tone of each where a combination is necessary.

A practical example of what the color filter accomplishes in the making of a negative is clearly demonstrated by viewing a piece of art or color transparency through a piece of ordinary colored glass. For example, if a piece of red or orange glass is used the blues and darker tones which would require considerable blue to give proper strength appear very pronounced, while yellows, bright reds, and other tones not requiring as much blue will appear light. Thus through the use of the color filters the proper strength of color for the respective plates is proportioned.

By properly combining the three so-called primary colors, yellow, red, and blue, any secondary color may be reproduced. This principle is the one upon which process color printing is based. By photographing first through a blue filter the negative is obtained from which the yellow printer is made, the blue filter having absorbed the blue and intensified the yellow; through a green filter for the red printer, the green filter having absorbed some of the blues and yellows and intensified the red; through a red filter for the blue printer, the red filter having absorbed the red and intensified the blue; finally the black printer or "key". The filter used for this negative depends upon the nature of the copy. An orange filter is sometimes used and again it may require a green or yellow filter to properly add weight of color, as well as drawing, or to strengthen the detail in the subject.

It should be noted here that there are many densities of each colored filter and that it is possible to improve some color separations by deviating from the regular established filters, depending entirely upon the result to be obtained and the nature of the artwork.

The photography for separation negatives for two-color work depends entirely on the colors in the artwork and colors of the final printing. Here the photographer is given the information for the desired results and he then proceeds, using his judgment of how the particular piece of art will color separate. He will make two color separated continuous tone negatives, one to intensify the color to be used as the color printer, and the other to give the modulation or drawing and enough tone to balance the color. This is to be used as the key negative.

As a rule, one-color or monotone reproductions are photographed, without the aid of filters, on color-blind plates or film.

Line drawings and type matter are photographed on super contrast film to obtain as sharp a reproduction as possible.

(*To Be Continued*)

EQUIPMENT & SUPPLIES

Plate Depth Microscope

THE plate depth microscope made by Bausch & Lomb Optical Co. is used for measuring the depth of dots visually in photo-engraved and rotogravure plates. It is constructed from standard microscope parts—a regular microscope body and focusing mechanism, a vertical illuminating system, standard eyepiece, objective, and a fork-type base to straddle the area to be examined.

This microscope provides a magnification of 150 diam. and the measurement is made by rotating the fine focusing adjustment knob. Since the fine focusing knob of the microscope is graduated accurately, it is possible to focus at the lowest part of the etched area—take a reading on the focusing knob scale—revolve the focusing knob to raise the body tube so that the top of the dot is in focus and again take a reading.

The difference in readings is obtained and each single graduation of rotation is multiplied by 0.0025mm or 0.0000975 in. to obtain the height of the dot. If the reading is taken on letterpress plates, it is possible there may be one complete revolution or more. If so, the value of each revolution is 0.125mm or 0.004921 in. and this is added to the value received from the difference in scale reading.

For the benefit of those who are not familiar with this exact type of measuring instrument, Bausch & Lomb caution that in using such a method of measurement the operator must be extremely certain the microscope is in best focus. The slightest deviation through carelessness will result in inaccurate readings.

Further information may be secured from Bausch & Lomb Optical Co. direct, or *Printing Equipment Engineer* will be glad to pass along your request.

Bausch & Lomb Optical Co.'s Printing Plate Depth Microscope is used for measuring visually the depth of dots in photo-engraved or rotogravure plates (cylinders). Magnification 150 diam.

To Display First Presses

REN R. PERRY, Harris-Seybold Western District Manager, has announced that the first Harris offset press, Model S4L, a 22 in. by 30 in. single color, and its 1948 counterpart, the new Model 128 (21 in. by 28 in.), will be featured in a graphic arts equipment display at Western District Headquarters, 555 W. Washington St., Chicago, during May, June, and July. These two models, the oldest and newest, are representative of a half-century of offset press design and development, Perry stated.

Other equipment on display, Perry reported, will include a new 44 in. Seybold Auto Spacer; the recently announced Seybold "Hydrodrill", multiple spindle precision drill-slotting machine; single spindle Challenge drill, distributed by Harris-Seybold throughout the middlewest; and Seybold paper cutting knives. The Western District Service Department, carrying Harris and Seybold replacement parts, will also be shown to visitors.

All-Steel Gauges

CHALLENGE Style E, Eh, and M Paper Drills are now being equipped with all steel arc-welded back gages, according to announcement by The Challenge Machinery Co. This method of construction provides greater strength, rigidity, and longer wearing qualities than the iron casting formerly used. The improved gages on these Challenge machines are automatic in operation, enabling the operator to keep both hands on the stock until all holes are drilled. The only time he touches the side-guide is to return it to starting position. The side-guide latch is automatically tripped when each hole is drilled, and the guide is moved from stop to stop by pressure of the stock against it. Six stops are standard; more can be added at any time.

Motor Control Center

A NEW motor control center which makes possible controlling any number of motors rated up to 200 hp at 440 volts from one central location, has been announced by the Control Divisions of the General Electric Company. In addition, this control center may be used for mounting all controllers for auxiliary motors such as ink pumps, reel and margin control and ventilating equipment. These control centers are designed so that all connections can be made from the front, thus permitting the centers to be lined up against the wall or in back-to-back fashion to conserve space.

These new control centers consist of standard starter units which are slid into vertical, cabinet-type sections in "building block" fashion. The sections are 90 in. high, 20 in. wide, and 12 in. deep. The starters are furnished in five different sizes. Each starter is a complete, fully-enclosed unit which can be arranged within the vertical sections to suit the requirements of the user.

Power connections to the starters are made by "clothes-pin" contacts which grasp vertical busses in the rear of the

General Electric's Motor Control Center (CR7097). This is front view of two vertical sections. Size 1 starter removed. Also shown is "stab" connector which engages vertical bus.

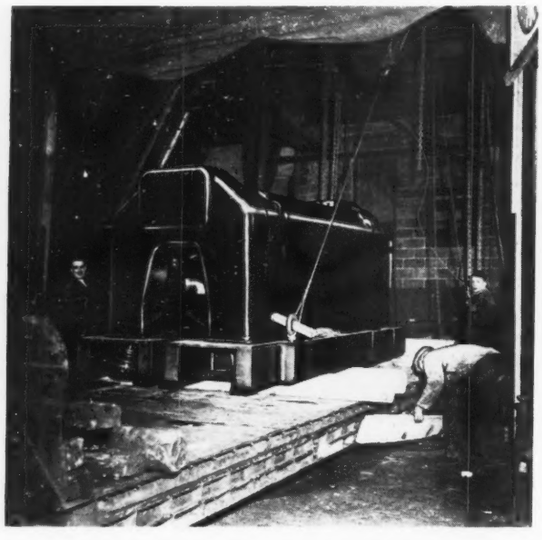
sections when the starters are slid into place. Control interconnections to other motors and control are made through a special wiring trough, with a removable cover, which runs the length of the section. All wiring can be done from the front without disturbing the starters.

Each starter has a built-in circuit breaker for short-circuit protection. These breakers are interlocked so that the doors of the sections cannot be opened when the power is on.

Further information is contained in bulletin GEA-4979, obtainable direct from General Electric Co., or *Printing Equipment Engineer* will be glad to pass along your request.

Complete Units Delivered to N. Y. Times

FULLY assembled press units on their own bedplates, weighing approx. 21 T. each, have been delivered to the pressroom of the New York *Times*, announces the Wood Newspaper Machinery Corp., Plainfield, N. J. Fifteen of these Wood Unit Presses with Wood High Speed Folders, are being installed by the New York *Times* now, with the addition of a sixteenth unit contemplated.



One of the Wood newspaper press units (fully assembled on its own bed plate) being lowered from street level through special hatchway so it can be placed in New York *Times* pressroom. This package weighs 21 T.

To handle such tremendous "packages" required a truck and trailer with 26 wheels; each wheel had a special heavy-duty, puncture-proof, seal-proof tire. Truck and trailer measured 63 ft. in length by 8 ft. in width.

Getting permission from bridge, highway and tunnel authorities for the passage of each load presented a tough nut to crack. After this was straightened out, the maximum load for one trip was tested. It was discovered that two press units with small parts—or, in weight, a matter of 50 T.—could be carried safely on each trip.

The *Times* expects to save 60% roughly over the old method in the cost of labor for erecting and installing the units. Giving an approximate figure, the *Times* mechanical department says it should have the new press units rolling 75 days ahead of what it would have taken if the presses had been delivered in the "broken down" condition. In other words, a saving in time of five days per press unit.

A new Wood feature is an oil pump driven from a main driving shaft. On the main-drive side, this pump lubricates gears and all bearings under oil-tight seals. On the other, cylinders have a splash system, also under machined and fitted seals that prevent leaks. Type and impression cylinders have SKF preloaded bearings. These bearings are set in the factory to uniform pre-loading standards.

All presses are equipped with the Wood Autoclamp for locking stereotype plates on the cylinder. A spring-back tension clamps plates with a power pressure that can't loosen until released, manufacturer states.

For additional information write to Wood Newspaper Machinery Corp. or your request will be transmitted by *Printing Equipment Engineer*.

Counting Electrically and Photo-Electrically

SIXTEEN-PAGE Bulletin with illustrations showing electric counter applications for counting parts, cartons, cases, boxes, mechanical operations, oranges, towels, folding machine production, etc. Illustrations show both photo-electric actuation and operation with specially - designed actuating switches. Bulletin may be obtained from Production Instrument Company direct, or through *Printing Equipment Engineer*.

Self-Contained and Portable Dust Collector

A SELF-CONTAINED portable dust collector is available from the Monomelt Company, Inc., as optional equipment for Plane-O-Plate and Rotashaver rotary plate and other shavers. This automatic vacuum disposal unit is designed to keep the shaving table free from chips and shavings.

Positive suction draws chips and shavings from a chip-catcher on the cutter head, through a 4 in. flexible hose, down a shaft behind the motor. Heavy particles fall into a large bin, while the finer dust is caught by the filters. The filtered air passes through the motor chamber above the filters, cools the motor, then exhausts through the vent at the top of the cabinet.

Some of the physical details are as follows: (1) Steel cabinet measures 22 in. wide, 25 in. front to back and 44 in. high. (2) When in operation, the unit tests 500 c.f.m., air speed 5700 ft. per min., static pressure $3\frac{3}{4}$ in. (3) 1 h.p. electric motor, 3450 r.p.m. (4) Switch, with overload protection, is wired to shaving machine so dust collector runs only when shaver operates. (5) Dust pan capacity, 3.7 cu. ft. (6) 24 cloth filters total 162 sq. in., 18 in. by 9 in.

A bulletin may be obtained by writing Monomelt Company direct, or you may send your request to *Printing Equipment Engineer*.

At right is shown the Monomelt new Portable Dust Collector. When attached to plate shaving machine the collector keeps the shaving table free from chips and shavings. Chips and small particle removal is accomplished by vacuum through a 4 in. flexible hose.

View of D.S.J. Vari-Typer recently announced by Ralph C. Coxhead Corp. Supplied with proportional spacing type fonts, and with what is called automatic justifying mechanism. It is still necessary to pre-type each line. On the sheet in the D.S.J. Vari-Typer can be seen first-typed lines with second-typing of each line at the right.

D.S.J. Vari-Typer

THE D.S.J. Vari-Typer has been announced by Ralph C. Coxhead Corp. The machine, supplied with standard typewriter keyboard produces typed matter with proportional width letters and with automatic justifying mechanism. The automatic justifying mechanism on the D.S.J. model Vari-Typer, though completely different than previous models, still makes it necessary to pre-type composition. In the new method the operator sets marginal stops to the desired width of the layout copy. The line is typed as nearly to that width as possible, presses a tabulating key and types the line over. No further calculation or manipulation is necessary. A "memory" unit in the mechanism registers the amount of increments necessary to bring the line out to justification and automatically sets the spaces between the words (not letters) to give each line its equi-distant length.

The varying widths of the different characters in the alphabet are automatically spaced in their proportionate widths. Thus the normally wider letters like M and W receive their full space allotment while the narrower letters like the i and l are automatically spaced closer to the adjoining characters in the words in which they appear.

The D.S.J. Vari-Typer writes various sizes and styles of type from 5½ pt. newspaper style to 12 pt. style book types.

Type fonts are carried in relief on a plate curved in the shape of a segment of a circle, approx. 2½ in. across the span and weighing less than $\frac{1}{5}$ oz. Manufacturers states type font changes are made from one plate to another faster than the time required to refill a mechanical lead pencil.

Printing impression of each letter is electrically controlled. A special carbon paper ribbon is used and it passes through the impression mechanism once and is discarded.

Protecto-Plate Prevents Engraving Damage

PROTECTO-PLATE, manufactured by Eronel Industries, is announced as a new packaging product for engravers and printers. It prevents scratches, damage by impact and is impervious to rodent urine, alkalies, acids, moisture, etc.

For shipping or filing plates Protecto-Plate insures protection it is claimed, from the time of etching until lockup on the press. It is transparent to provide easy identification.

It is also stated the packaging material solves filing and storing problems in the printing plant inasmuch as it permits cuts to be stacked one upon the other indefinitely without danger of damage.

Three-Day Conference

The entire sales organization of the Dayton Rubber Co's. Dayco Roller Division attended a three-day conference at the plant in Dayton, Ohio the latter part of April. Highlights of the meeting were new developments in rollers, color separators and fountain dividers and an inspection tour of the greatly expanded plant facilities. The new production layout is geared to cope with the largest volume of business in the company's history, according to Norman H. Neilson who led the conference.

On the program with Neilson were A. L. Freedlander, president of the Company; Joseph Rockoff, vice president in charge of development; T. C. Davis, vice president in charge of mechanical sales and J. D. Hershey, advertising manager.

Paper Cutter Clamp Facing

The method of laying a piece of cardboard over stock being cut to prevent clamp marks being impressed into the stock is not followed in the print shop of the Oberlin *Times*, published at Oberlin, Ohio. Instead, Manager Carl Kinney jr., takes a piece of cardboard the width of the under side of the clamp and long enough to reach from one side of the paper cutter to the other. He fastens this to the under side of the clamp by means of double faced Scotch tape. The Scotch tape sticks to the cardboard and also to the under side of the clamp, thus securely fastening the cardboard to the clamp. The cardboard comes just even with the front edge of the clamp but does not extend beyond it. The cardboard clamp facing lasts a long time and in case it finally comes loose a new piece of double-faced Scotch tape and cardboard are applied.

Intertype Matrix Faces

INTERTYPE Corporation announces several additions to the Cairo and Cheltonian families: 30 and 36 pt. Cairo Condensed, 30 pt. Cairo Bold Italic, 8 pt. Cheltonian Medium with Italic, 18 pt. Cheltonian Bold Extra Condensed with Italic, and 36 pt. Cheltonian Medium. Write to Intertype Corporation, Brooklyn 2, N. Y. for advance showings.

ABCabcdefg234

30 Pt. Cairo Condensed

AB abcde 123

36 Pt. Cairo Condensed

ABabcde234

30 Pt. Cairo Bold Italic

ABCDEF abcdefghijklmnopqrstuv 12345
ABCDEF abcdefghijklmnopqrstuv 12345

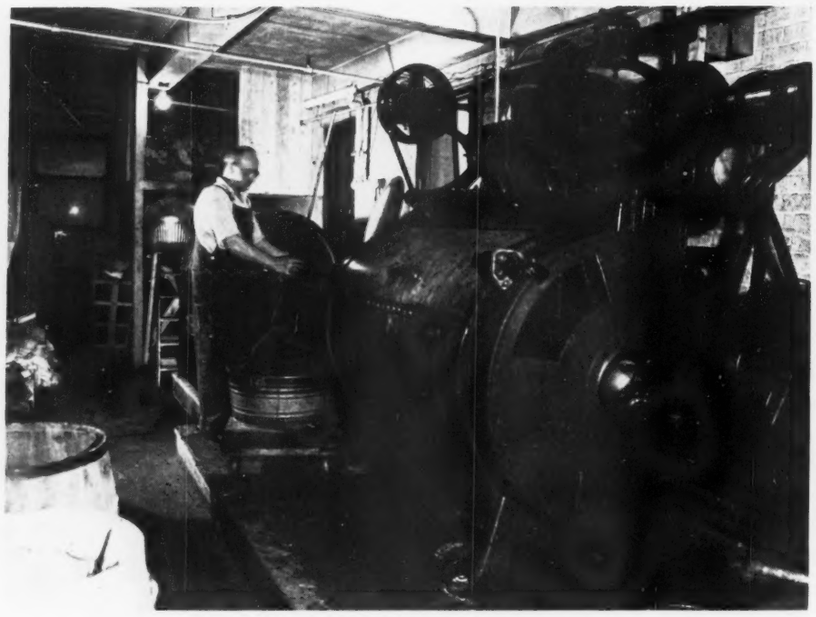
8 Pt. Cheltonian Medium with Italic

ABCDEFG abcdefghijklm 123
ABCDEFG abcdefghijklm 123

18 Pt. Cheltonian Bold Extra Condensed with Italic

AB abcde 23

36 Pt. Cheltonian Medium



View in laundry maintained by The Marshall-White Press, Chicago. In this plant are used approx. 200 lbs. of wiping cloths per day. Wipers last from six to ten washings. Plant is operated by one man.

Wiping Cloths No Problem in Chicago Printing Plant

By H. A. GERLACH*

**Vice President, The Marshall-White Press Chicago, Ill.*

IT HAS been the experience of our company that the installation of a wiping cloth laundry is a wise procedure for any printing or lithographing plant that wishes to exercise quality control over as many production points as possible. Then, too, if the quantities of wipers used is of sufficient volume there is the matter of always having at hand the particular kind of wiper with which the most efficient cleaning work can be done. In a fairly large size plant these two items are of considerable importance. In some localities, suitable wipers are hard to obtain at current prices.

About 200 lbs. of wipers per day are used. Unless a plant would have a very large inventory, of course, this would mean quite a bit of in-and-out trucking. With a self-contained laundry in operation that problem is eliminated.

Whether or not it would be profitable for a printing plant to operate its own laundry is a question, of course, which must be determined by that plant's management. In our own case, it is a profitable investment.

Our laundry consists of one laundry machine, one water extractor and one steam dryer. The equipment is operated by one man in approx. 400 sq. ft. of floor space. The laundry has been in operation for a period of nine years.

The usual commercial laundry would hardly be able to set up the restricted requirements we have formulated and have adopted as a daily routine in the operation of our own laundry. Most laundries, including our's, use caustic soda for cleaning the wipers. The soda is dumped into the laundry machine in powder form. There may be two or three such baths using strong caustic soda solution depending upon how much ink, gasoline, gumming solutions, etc., has been left in the wipers after each washing operation.

After the caustic soda solutions have done their job, water rinses will not completely eliminate the alkaline condition of the wipers. In the offset-lith process such alkalinity is harmful to the plates and must be completely removed. To accomplish this, the final rinse is a weak solution of acetic acid. The acetic acid solution neutralizes the alkaline condition.

The wiping cloths we use are called "Lightweight Striped Ticking." While we don't have any definite figures concerning their durability, the wipers last from six to ten washings. Since the wipers are used for a variety of purposes, the useful life of the wiper is naturally affected by the different uses. For offset plates, No. 1 Tinted Cheesecloth is used, which after soaking in a gummed solution, cannot be used again.

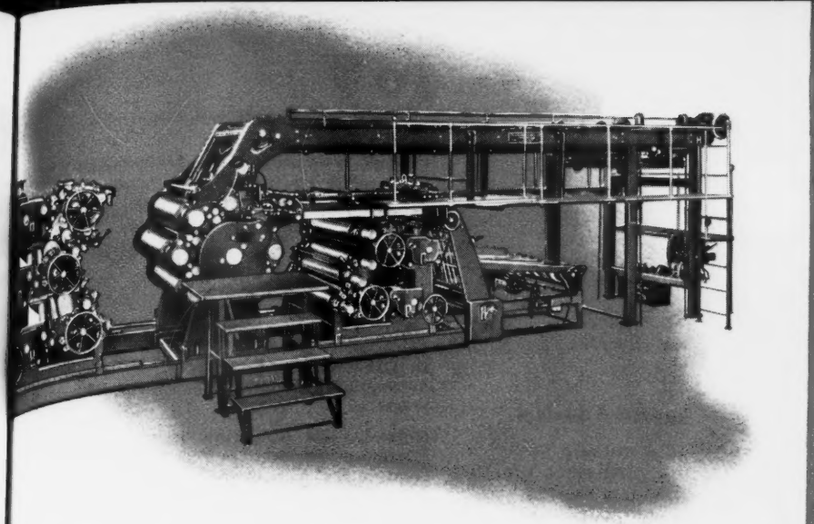
POSTER STAMP CONTEST WINNER

FRANK PERSELL of the Indianapolis Club of Printing House Craftsman won the 1949 Printing Week Poster Stamp Contest sponsored by the International Association. There were 40 designs entered in the contest. Members of the International Board judged the 40 entries at

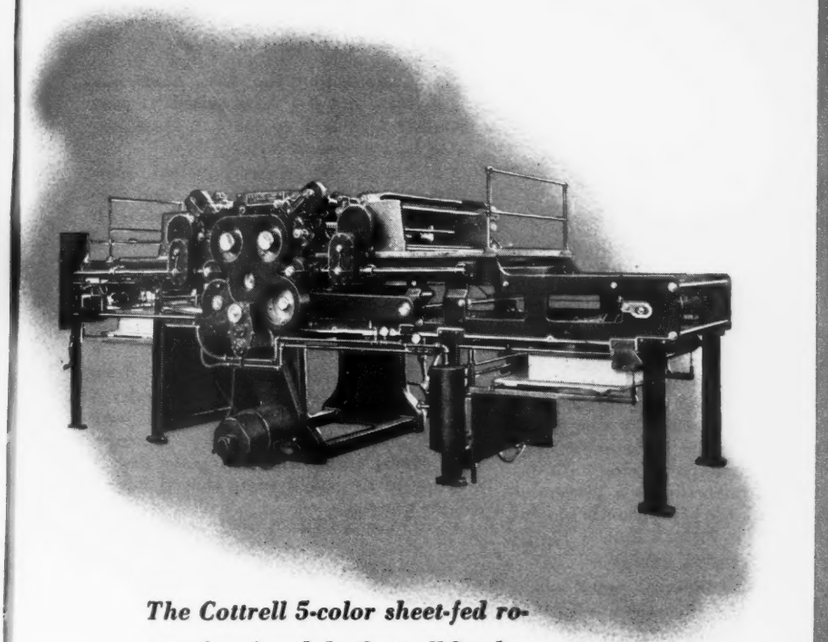
Frank Persell

the Mid-Winter Board meeting in Cincinnati in February. Prize for winning the contest is a cup which will be suitably inscribed. Cup award will be made at the Craftsmen's Cleveland convention next August, to the Club with which the winner is affiliated; in turn, the Indianapolis Club will award the cup to Mr. Persell during its 1949 Printing Week meeting. Nine other awards consisting of honorable mention certificates will be presented.

The design shown in the accompanying reproduction will be used by the International Association as the official poster stamp design for the 1949 observance of Printing Week to be held by affiliated clubs during the week of January 16 to 22, 1949.



Color Printing in Volume!



The Cottrell 5-color sheet-fed rotary (top) and the Cottrell 2-color sheet-fed rotary both print at speeds to 5800 sheets per hour.

Cottrell presses deliver a large and ever-increasing share of the world's color-printing production. The enviable performance records set by Cottrell... both sheet and web fed, have given them their world-wide reputation for outstanding printing quality... *in volume.* They offer printers a sound investment in profitable printing production.

Cottrell

C. B. COTTRELL & SONS CO.

Westerly, Rhode Island

New York: 25 E. 26th St. • Claybura Division: 3713 N. Humboldt Ave., Milwaukee, Wis.
Chicago: Daily News Bldg., 400 W. Madison St. • Smyth-Horne, Ltd., 13 Bedford Row, London W.C. 1, Eng.

Brunak—*Anti-Oxidation Surface Treatment for Aluminum*

By **MICHAEL H. BRUNO**, *Manager, Research Department, LTF*
and
PAUL J. HARTSUCH, *Supervisor, Metals & Surface Chemistry Div., LTF*

ZINC and aluminum plates have been used in lithography ever since the industry converted from stone to metal. Zinc plates are found in lithographic plants all over the country. The use of aluminum, however, is localized. Eastern lithographers employ it extensively; midwestern lithographers hardly at all, despite the fact that many have tried.

When run in the middle west, aluminum often develops a pitting type of corrosion which shows up on the plate as an "ink-dot" or oxidation scum. The cause is believed to be associated with the nature of the local water supply.

It has been thought that the oxide film which always forms on an exposed aluminum surface was inert and so impervious that it prevented further oxidation. However, there is evidence now that this oxide film is not uniformly impervious. Alexander Jenny in his treatise *The Anodic Oxidation of Aluminum and Its Alloys* says, "the widely made assumption that a freshly prepared aluminum surface on exposure to air immediately becomes covered with an oxide film which opposes further access of oxygen is shown to be without foundation." Curves which he gives show that the absorption of oxygen is completed only after about 14 days, and even after this time aluminum plates gain weight slowly over a period of 90 days.

Areas Have Different Charges

It has been found in addition that different areas of an aluminum plate have different electrical charges; parts of the surface are cathodic (negative) and others are anodic (positive). When moistened, these areas of different electrical charge set up a galvanic action like that which takes place in a storage battery, and this promotes the formation of oxidation pits in the aluminum.

Ink-dot scum was encountered when cellulose gum was first tried on aluminum. The small amount of salt in the gum solution apparently speeded up the galvanic action to such an extent that ink-dot scum appeared almost invariably at the very start of the press runs. Gum arabic occasionally produced the same effect. It thus became apparent that the answer to the problem of oxidation on aluminum was a surface treatment of some sort.

A survey of the patent literature on protective chemical treatments for aluminum did not yield any method which would be practical for lithographers. Most of the methods required relatively long periods of immersion in the treating solutions, and the solutions had to be hot.

Unsuitability of Anodized Surface

The "anodizing" of aluminum by an electrochemical process produces a surface which is covered with a hard layer of hydrated aluminum oxide which should prevent oxidation scum on the press. The process is relatively expensive, though, and the electrochemical action destroys part of the grain structure on the plate. It was found that it was more difficult to get developing ink to adhere to an anodized aluminum plate with an albumin coating than to ordinary aluminum albumin plates. Trouble was experienced also in trying to make deep-etch plates on anodized aluminum because of the difficulty in etching through the anodized film.

Cronak Treatment Not Suitable for Aluminum Plates

Since the oxidation of zinc plates with its attendant troubles has been eliminated almost completely by the Cronak surface treatment, an attempt was made to adapt this type of treatment to aluminum. Made up of sulfuric acid and bichromate, the Cronak treatment produces an inert film on zinc through the reaction of the acid with the zinc which "reduces" part of the bichromate. The reduced bichromate combining with unchanged bichromate forms a protective coating which covers the usually chemically active zinc surface and is highly effective in preventing oxidation.

However, since sulfuric acid reacts very slowly with aluminum, the Cronak solution would not be expected to produce a surface film on it and it doesn't. It was known that hydrofluoric acid readily attacks aluminum and aluminum oxide and an experiment was conducted to substitute it for the sulfuric acid in the Cronak solution. When the concentration of hydrofluoric acid and bichromate was adjusted properly, the solution produced an excellent surface film on aluminum which protected the surface from oxidation for a long period of time. Unlike Cronak, though, it was found that sodium and potassium bichromate did not produce results as satisfactory as ammonium bichromate.

To distinguish the process from Cronak, it was named Brunak. Sample plates, treated in a Brunak solution, were immersed for six months in Chicago tap water. Untreated aluminum plates were immersed for a like period for controls. At the end of six months, the untreated aluminum plates were so badly corroded that some of the pitted areas had penetrated the plate completely. The Brunak plates were still largely free from oxidation.

Brunak also makes a tremendous improvement in the ease with which albumin plates can be developed and cleared, and with which the stencil on deep-etch can be removed. Gentle swabbing with absorbent cotton usually is sufficient in both cases.

The Brunak Formula

48% Hydrofluoric Acid	3 fl. oz.
Ammonium Bichromate	27 avoir. oz.
Water	3 gallons

Note: Do not substitute Sodium or Potassium Bichromate for the Ammonium Bichromate specified.

Brunak solution should be stored in hard rubber or stainless steel containers. Glass, porcelain, and iron containers should not be used unless treated with a material similar to "Amercoat 44", primer, body coat and sealer. (American Pipe and Const. Co., P.O. Box 3428, Terminal Annex, Los Angeles, 54.)

Directions for Use

1. Counter-etch the plate. Make sure it is clean and free from grease. A good counter-etch is 1 oz. 48% hydrofluoric acid in a gallon of water.
2. Flood the counter-etched plate with water, drain for 15 sec., and then immerse it in the Brunak solution. If solution is fresh, keep plate immersed for 1½ min. Increase this time up to 3 min. as solution becomes exhausted. Scrubbing plate while it is under the solution is not necessary. The operator should wear rubber gloves.
3. Remove plate from solution, drain for 15 to 30 sec., and wash under a gentle flow or spray of water until wash water shows no yellow color. Squeegee off excess water and fan plate dry. A properly Brunaked plate should have a light tan color.

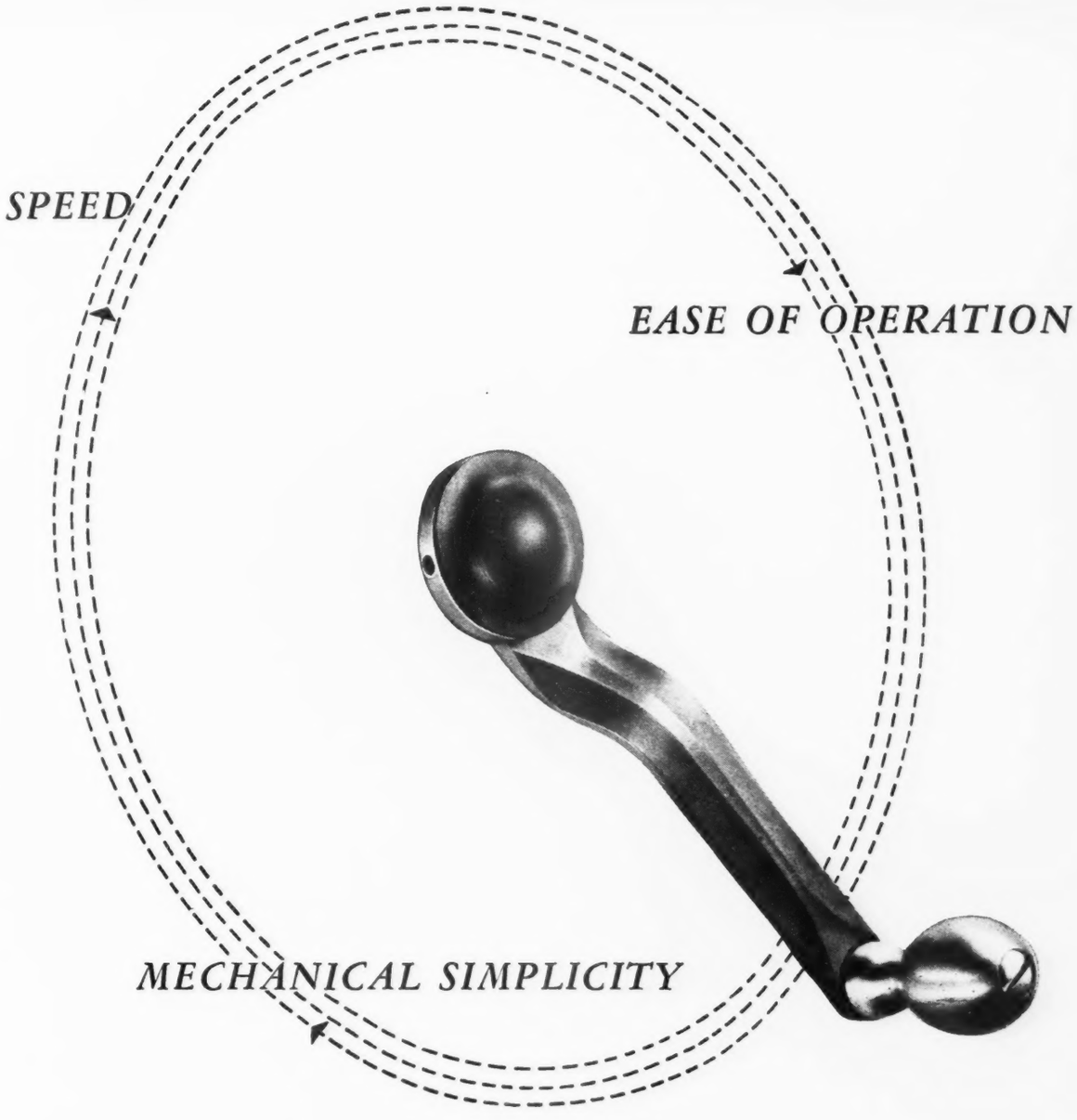
Optional Procedures

Brunak may be applied in the plate-making sink or in the whirler if a large tray or tank is not available.

Sink Treatment: Counter-etch and wash the plate; then lower rack so that the plate is horizontal. Flow Brunak solution over the wet plate as rapidly as possible. Try to cover it almost at once to prevent streaking. Allow solution to stand on the plate for 1½ to 3 min., working it over the surface intermittently, then wash under a gentle stream of water until rinse water shows no yellow color. Squeegee excess water off the plate and fan dry.

Whirler Treatment: The counter-etched and washed plate should be placed in the whirler and rotated to 25 to 30 r.p.m. Flood the plate with water, whirl for fifteen seconds to remove excess, and then pour Brunak solution rapidly onto the wet plate. Start pouring at one edge and continue across plate to the other edge to prevent the formation of a dark colored "hot-spot" in the center. Continue whirling for 1½ to 2 min., then

(*Continued on Page 42*)



Linotype's One-Turn Shift has them all

Three turns and four seconds. On the Linotype, that's all it takes to shift from the No. 1 to the No. 4 magazine . . . thanks to the One-Turn Shift.

Powerful flat spiral springs with adjustable tension, counterbalance the magazine load. Ball- and roller-bearing construction makes the shift practically effortless from the operator point-of-view. Most important, there's nothing to get out of order. Simplified construction assures years of dependable operation.

Like so many other time-saving features, the One-Turn Shift is exclusively Linotype, furnished as standard equipment on all models, except Model 5.

MERGENTHALER LINOTYPE COMPANY, 29 Ryerson Street, Brooklyn 5, New York

LINOTYPE

Linotype Garamond No. 3 Family

Collotype discussed at Chicago meeting of Craftsmen — Vagaries of process explained

By A. G. FEGERT

COLLOTYPE, otherwise known as the "photogelatine process" of printing, was announced for the subject to be presented to the Chicago Club of Printing House Craftsmen at its March meeting. Instead of the usual 250 executives expected at average meetings, more than 350 attended. The presentations by two representatives of firms in the business—Thomas D. Hook, vice president and sales manager, Black Box Photo & Collotype Studio, Inc., Chicago, and Walter Fredrick, president, Fredrick Photogelatine Press, New York, N. Y.—were such that long after the regular meeting had adjourned, many of the men asked for more details. It was said during the introductions of speakers that only six firms were doing the work commercially in the United States. One printing press engineer who was asked by the writer why there were so few firms in the business suggested that it was because of the patience required on the part of craftsmen to develop the necessary technique to make it financially and artistically successful.

Mr. Hook explained that the process is so little known among buyers of printing that he has been obliged to travel around the country to demonstrate to advertising groups how it can be utilized with good effect by men who want pictures to appear in print without any evidence of screens, since photogelatine is a screenless printing process. He said the chief advantage of the process is its ability to reproduce photographs, paintings and every other type of art work in continuous unbroken tones. From a sales point of view, with this advantage, is added the economy factor because runs from 100 to 7000 copies of pictorial copy can be done by the photogelatine process much cheaper than by any of the usual methods of reproduction. He also explained that greater economy may be obtained where the illustrations are numerous or large in area in which cases the cost of typesetting is eliminated to a large degree. He said quality is comparable to the best that can be produced by either letterpress or offset in one color or full color, and both sides of a sheet may be printed with equally good results. He indicated that when customers understand the process and have seen results achieved, they express appreciation by utilizing it wherever possible.

Mechanics of Process

The mechanics of the process were explained and illustrated at the meeting, by Mr. Fredrick who has been in the business for thirty years. He explained that the first step is in the preparation of the photographs and other copy which is handled much the same as such preparation is done for reproduction by means of the photo-lithographic process. He accented the fact that original copy need not be in colors in order to produce a full color job, but that black and white originals may be used and finished work will be in full color in continuous, unbroken tones. Enlargements may also be from the original without loss of values in artistry. Whatever the size of the original, the copy to be used for platemaking purposes must be the exact size of the proposed printed reproduction.

Mr. Fredrick explained that a direct reproduction of the copy is made on continuous-tone negatives without the use of screens or other mechanical divisions. Solid matter is reproduced by means of line negatives. Retouching is done on the negatives since no change can be made after the images have been transferred to

CONGRATULATIONS *New York Herald Tribune* on winning the Francis Wayland Ayer Cup in the 18th Annual Exhibition of Newspaper Typography. Since 40% of the award is based on printing, we take pride in the fact that Beveridge mats were used in producing this prize-winning paper. We recommend to all newspapers the use of top quality Beveridge mats and our mat service.

New Products Division

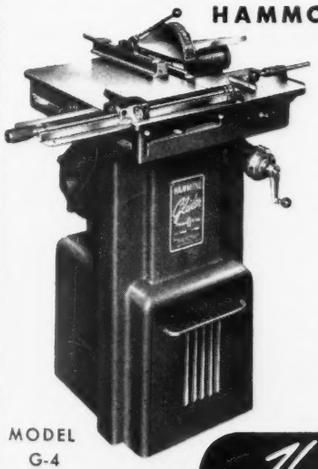
The Beveridge Paper Company

Indianapolis 4, Indiana

Step up and saw with a

TRIMOSAW

FOR PRECISION
SMOOTHNESS
SPEED



MODEL G-4

HAMMOND *Glider* TRIMOSAW

The Hammond Glider TrimOsaw is "The Saw with the Ball Bearing Table". It is the finest ever built by ourselves or anyone and is the standard of comparison.

HAMMOND *Mercury* TRIMOSAW

The Hammond Mercury TrimOsaw is "The Saw with the Ball Bearing Gauge". It is the best of all the other makes as it has all the famous Glider features other than the ball bearing table.

MODEL M-9

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

the plates. Thus whatever is to appear in print must be put into the negatives.

Chemistry

The speaker said that gelatine used in the process must be of the purest quality and that certain chemicals are added—he did not go into details but said that some things are kept secret by each successful operator in the business. The mixed substance is put through a cooking process to 150 deg.—the amount of cooking needed being determined by the chemist who is doing the work. He stressed the importance of giving the solution just enough cooking, since either too much or too little lessens the quality of the substance.

Coating the Plate

The hot solution is applied with a circular motion and as it flows on glass or metal, great care is exercised by the operator, so that uniform thickness of the film is .003 of an inch. Then the treated plate is dried. Transfer of the image from the negative to the sensitized plate is achieved in a vacuum frame. Light is passed through the negatives to the gelatine. Previous to exposure, the speaker explained, the gelatine plate is smooth, hard, and uniformly absorbent. As light strikes it, a chemical change takes place which makes it moisture-repellent in proportion to the amount of light admitted, and this reaction is the heart of the photogelatine process. The tone negatives, consisting of lights and shadows will permit varying degrees of light to pass through. Solid film areas will permit no light to reach the gelatine, while clear areas will admit the maximum of light. Thus the deepest shadows and highest highlights are reproducible in addition to all of the varying middletones.

Printing from the Plate

The plate is affixed to the press much the same as is done in offset printing. Flat-bed presses and rotaries are used. The only make-ready possible is that which is obtained by treating the plate chemically. Wrong atmospheric conditions in the pressroom, or a wrinkle in the paper might spoil the plate in which case, the whole process must be started over again, there being no salvage. How many sheets may be run from a plate is unpredictable. The speaker said that normally a plate will last for 3000 to 5000 impressions on a sheet 44 in. by 64 in. and such a run will be done in about 8 hours.

Special Inks

Inks are specially made for the photogelatine process by one printing ink manufacturer (Chas. Hellmuth & Co.) and one paper manufacturer (Hawthorn Paper Co.) has been doing research work to provide better paper for the process. Printing ink rollers pass directly over the gelatine plate, moist portions of the plate repelling the ink while dry portions accept it and transfer the ink to the paper making an exact duplicate of the original subject matter in one continuous tone.

Plate Durability

During the question period, Mr. Fredrick was asked if plates could be preserved for future use, and he said that the impression would not last for longer than three or four days because of its chemical composition, but that plates could be run for two or three days in succession. Another question was asked concerning conditioning of paper and he said paper must be conditioned where register work is to be done.

Concerning the history of the process, Mr. Fredrick said that it was originally invented in 1867 by Joseph Albert of Munich, Germany, but was not used in this country until about 1918. A common use is quantity production of photographs; reproduction of etchings, paintings for framing and sale; also for a wide variety of reproductions where softness and fidelity of tone and detail in the reproduced picture are desired.

Appoints Agent

Ernest Payne, president of Payne & Craig Corp., announces appointment of Type & Press of Illinois, Inc. with offices at 220 S. Jefferson St., Chicago, to handle the Craig Dri-Spray in Illinois.

This is the MORRISON Slug Stripper
. . . That Cuts Your Make-Up Costs and Saves Time on Corrections
TYPE corrections are made, and lines floated faster and easier with the MORRISON Slug Stripper. Slugs of all kinds or single foundry or Monotype characters are quickly cut down to required thickness and mounted on base without mortises. Stripping slugs or single characters to the thickness of zinc, electro or shell stereo is a great convenience in your composing rooms.
WITH YOUR MORRISON SLUG STRIPPER, YOU CAN PROCESS SINGLE CHARACTERS OR LINES UP TO 30 PICAS IN LENGTH AND 72 POINTS IN WIDTH TO TACK IN PLACE ON WOOD MOUNTINGS OR PATENT BASE. WRITE TODAY FOR COMPLETE FACTS ABOUT THIS TIME-SAVING EQUIPMENT.
The Morrison Company
125 W. MELVINA STREET • MILWAUKEE 12, WISCONSIN

One will get you Five!

Inside view shows how ONE* Challenge Hi-Speed Quoin operates as a series of FIVE Ordinary Quoins . . . .

*7½-inch size; others listed below

Challenge

Here are the "Odds" on Hi-Speed Quoins

HI-SPEED	■	ORDINARY
1—3-inch	equals	2
1—4½-inch	equals	3
1—6-inch	equals	4
1—7½-inch	equals	5
1—9-inch	equals	6
1—10½-inch	equals	7
1—12-inch	equals	8

There's no quoin like a Hi-Speed Quoin! It gives you the equivalent of two to eight ordinary quoins all in one self-contained, self-locking unit . . . operated with direct expansion—a point at a time—by a single key.

In actual shop practice two Challenge Hi-Speed Quoins do the work of four to eight ordinary quoins, saving up to 80% and producing better, safer lock-ups—no slippage . . . no reglets . . . no work-ups. An easy-to-read point indicator makes it possible to unlock and relock the form at any time without disturbing the register.

Challenge Hi-Speed Quoins—for press or foundry forms—are immediately available in seven sizes from Challenge Dealers in All Principal Cities. 602

THE CHALLENGE MACHINERY COMPANY

"Over Fifty Years of Service in the Graphic Arts"

MAIN OFFICE AND FACTORY: GRAND HAVEN, MICH.

CHALLENGE HI-SPEED QUOINS

BRUNAK

(Continued from Page 36)

flush plate thoroughly with water. Plate may be dried in whirler or removed and dried with a fan.

Platemaking on Brunaked Aluminum

Platemaking may proceed as soon as the Brunak film has dried, or the treated plate may be stored indefinitely until required.

No special techniques are required for either albumin or deep-etch platemaking on Brunaked aluminum except that for albumin plates the surface must be pre-etched. This is not too serious an objection since many plants, especially those using so-called synthetic albumin coatings, pre-etch all their plates. So doing prevents the possibility of scum from residual albumin or casein which is always left on the non-printing areas.

The tan, powdery material which forms must be washed off the plates before the pre-etch or coating is applied. Flood the plate with water and go over it thoroughly with absorbent cotton or molleton. When the cotton or molleton pad remains light tan instead of brown, the plate is clean.

Cellulose gum plate etch is recommended for pre-etching. Work a liberal amount of etch over the plate for about a minute, then wash it off with running water going over the surface thoroughly but gently with a cellulose sponge or wad of cotton. It should *not* be scrubbed vigorously, as the object of pre-etching is to leave a thin film of desensitizing gum over the entire area of the plate, which will make the later removal of albumin from the non-image areas of the plate more complete. If a cellulose gum etch is not available, use a gum arabic etch for pre-etching.

The plate is now ready for coating. Pre-etching, while not essential in the case of deep-etch plates, makes the stencil easier to remove as previously mentioned.

From this point on, the albumin or deep-etch plate is made as usual. It has been found that the final plate etch desensitizes any plate regardless of its previous treatments if the etch is dried on the plate, similar to gumming. This is true for an untreated aluminum or zinc plate and is true if either a cellulose gum or gum arabic plate etch is used.

After the etch is applied and dried, the plate is dampened and then gummed up as usual.

Conference Dates (*with organization names and principal officers*)

American Photo-Engravers Association — Frank J. Schreiber, Commissioner, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference — William Penn Hotel, Pittsburgh, Pa., July 19, 20 and 21, 1948. J. L. Stackhouse, Chairman, Easton, (Pa.) *Express:* Walter E. Wines, Manager, ANPA Mechanical Dept. 370 Lexington Ave., New York 17, N. Y.

Great Lakes Newspaper Mechanical Conference— Gibson Hotel, Cincinnati, January 16, 17, 18, 1949. President C. M. Kirk, Stereotype Supt., Detroit *News*; Secretary Al P. Oberg, Composing Room Supt., Flint (Mich.) *Journal.*

Illinois Newspaper Mechanical Conference — Faust Hotel, Rockford, Ill., Saturday and Sunday, September 25 and 26, 1948. President, Earl Anderson, Supt., Rockford Consolidated Newspapers, Rockford, Ill. Secretary, Howard Colton, *Daily Pantagraph,* Bloomington, Ill.

International Association of Printing House Craftsmen —Hotel Cleveland, Cleveland, August 8, 9, 10, 11, 1948. President, A. Gordon Ruiter, Supt., Forbes Lithograph Mfg. Co., P. O. Box 513, Boston, Mass. Secretary, Pearl E. Oldt, Chamber of Commerce Bldg., 12th Floor, Cincinnati, Ohio.

International Typographic Composition Association— Hotel Nicollet, Minneapolis, Minn., September 16, 17, 18, 1948. Frank M. Sherman, Executive-Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference — President, Ed. C. Funk, composing room foreman, Waterloo, (Ia.) *Daily Courier;* Secretary-Treasurer, Paul Kamler, mechanical supt., Clinton (Ia.) *Herald.*

Lithographers National Association — Greenbrier Hotel, White Sulphur Springs., W. Va., July 21, 22, 23 and 24, 1948. W. Floyd Maxwell, Executive Director, 420 Lexington Ave., New York 17, N. Y.

Missouri Newspaper Mechanical Conference — Tiger Hotel, Columbia, Mo., September 11 and 12, 1948. President Beryl A. Troutman, *Courier-Post*, Hannibal, Mo., Secretary-Treasurer O. K. Hammitt, *Monitor-Index*, Moberly, Mo.

National Association of Litho Clubs — Washington, D. C., April 29-30, 1949. President, Albert Tucker, Sauls Lithograph Co., Washington, D. C.; Secretary William J. Stevens, 1776 Broadway, New York 19, N. Y.

National Association of Photo Lithographers — Netherland-Plaza Hotel, Cincinnati, Ohio, Sept. 15, 16, 17, 18, 1948. Walter Soderstrom, Executive Secretary, 1776 Broadway, New York 19, N. Y.

National Graphic Arts Education Association — Hotel Pennsylvania, New York, N. Y., June 21, 22 and 23, 1948. Byron G. Culver, President; Fred J. Hartman, Educational Director, 719 Fifteenth St., N. W., Washington 5, D. C.

National Graphic Arts Exposition—International Amphitheatre, Chicago, September 24 to October 7, 1950. National Graphic Arts Exposition, Inc., A. E. Giegengack, President. Fred W. Hoch, Secretary, 461 Eighth Ave., New York 1, N. Y.

National Printing Equipment Association, Inc. — Edgewater Beach Hotel, Chicago, Ill., October 20, 21 and 23, 1948. James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — Hotel Statler, Boston, Oct. 23 and 24, 1948. President, Wm. H. Porter, Mech. Supt., New Haven (Conn.) *Register.* Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

New Jersey Press Association Mechanical Conference —1948 Conference tentatively to be held in Atlantic City, N. J., in June. Hotel and date to be announced later. President Neal E. Dyer, Mechanical Supt., Camden (N. J.) *Courier-Post.*

Northwest Mechanical Conference — Hotel Radisson, Minneapolis, Minn., February 12, 13, 14, 1949. President, Chas. R. McGuire, Asst. Mechanical Supt., Minneapolis (Minn.) *Star* and *Tribune;* Secretary-Treasurer, Henry Magnus, Machinist, Minneapolis (Minn.) *Daily Times.*

Pacific Newspaper Mechanical Conference — President J. W. Fitzsimmons, San Francisco (Calif.) *Call-Bulletin;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News.*

Pacific Society of Printing House Craftsmen — Mission Inn, Riverside, Calif., June 25 and 26, 1948. E. Deo Paul, President, 430 Court St., San Bernardino, Calif.; Blair Lord, Secretary-Treasurer, 3650 Fairmount Blvd., Riverside, Calif.

PNPA Mechanical Conference — William N. Hardy. Manager, PNPA, 209-213 Telegraph Bldg., Harrisburg, Penna. Chairman Mechanical Committee, E. O. Davies, Mechanical Supt., Harrisburg (Pa.) *Patriot* and *Evening News.*

Printing Industry of America—Edgewater Beach Hotel, Wed. to Sat. inclusive, Oct. 20-23; James R. Brackett, General Manager, 719 Fifteenth St., N.W., Washington, D. C. 1949 PIA Convention — Hotel Biltmore, Los Angeles, Nov. 14-17, 1949.

SNPA (Eastern Div.) Mechanical Conference—Walter C. Johnson, Manager SNPA, P. O. Box 1569, Chattanooga 1, Tenn. Chairman Executive Committee, I. J. Gardner, jr., Composing Room Supt., Chattanooga (Tenn.) *Times.*

SNPA (Western Division) Mechanical Conference— Secretary, C. W. Tabb, 723 Texas Bank Bldg., Dallas, Tex.

Southwestern Photo-Engravers Association — Roosevelt Hotel, New Orleans, La., June 27, 28, 29, 1948. Executive Secretary, Virginia Nichols, 3621 Country Club Circle, Fort Worth 4, Texas.

Southwestern Graphic Arts Conference—E. J. Deubner, Executive Secretary, 130 No. Volutsia Ave., Wichita 8, Kan.

Patents For The GRAPHIC ARTS FIELD

Covering patents issued March 16, March 23, March 30 and April 6.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issuing each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating

During the four weeks covered by this report, no patents have been issued for this heading.

Composing Room Equipment

During the four weeks covered by this report, no patents have been issued for this heading.

Feeding, Folding, and Delivery

2,437,792. SHEET FEEDING APPARATUS uses a pile elevator of the suspended type. It is adjustable so that opposite ends of the sheet pile may be independently raised or lowered to bring a portion of the pile of sheets to a plane level with the remaining portions. Thus unevenness due to any cause may be compensated. The elevator is made up of two longitudinally spaced cross beams which are supported by side bars. The ends of the cross beams are connected together by brackets which are welded to the cross beams. The bracket is formed with two vertically spaced, laterally extending arms to receive a downwardly facing hook. The arms have axially aligned openings of different diameter and the hooks are formed with laterally offset, vertical body portions provided with internally threaded bores are axially aligned with the openings in the arms. Jack screws are threaded through the aligned openings to hold the parts together and allow individual adjustment of either end of the cross beams. The jack screws may be placed for manipulation from above or beneath the cross beams. Invented by Walter E. Schneider, Pearl River, N. Y. Assigned to Dexter Folder Company, Pearl River, N. Y. Application June 1, 1944. 4 claims.

Plate Making

2,438,639. COLOR PROCESS REGISTRATION TABLE has a transparent bed for the support of a blank work sheet, and a stencil screen frame having a hingeable connection with the table. Adjusting screws are carried by the table and are engageable with the screen frame to tighten the hingeable connection to remove loose play therefrom. The work bed is shiftable in relation to the screen. A light source comprising continuous elongated lamps is positioned below the work bed and projects a uniform illumination upwardly. Invented by Ralph Lawrence, Miami, Florida. Unassigned. Application May 15, 1946. 1 claim.

2,439,213. A HEAT-RESISTANT COPOLYMER consisting of 58% para-chloro-alpha-methylstyrene and 42% styrene is claimed. Benzoyl peroxide may be used in the preparation of the composition. The product may be extruded, cast, or molded to produce such articles as printing plates, electrical insulation fixtures, coaxial cable spacers, etc. Invented by John Kispersky, West Lafayette, Ind., and Raymond B. Seymour, Chattanooga, Tenn. Assigned to Monsanto Chemical Company, St. Louis, Mo. Application March 20, 1946. 2 claims.

Printing Inks and Related Chemicals

2,437,857. A WATER-SOLUBLE UNSATURATED TRIHYDRIC TERPENE ALCOHOL is prepared by the oxidation of terpinolene. The hydroxyl radicals of the alcohol are secondary and tertiary hydroxyls. Two of the hydroxyls are attached to adjacent carbon atoms. The alcohol also has one double bond per molecule and forms white, triclinic crystals having a melting point of 121°–122° C. and a refractive index of about 1.54 when crystallized from

"Here's where you come in!"

The most important control over the quality of ZOMO ELECTRIC ZINC and A-Z ALLOY is *you*, Mr. Engraver!

Your suggestions . . . your ideas . . . yes, and your criticisms are carefully studied in the laboratory shown above.

Our technicians in this laboratory and our advisors in the field are constantly working toward a single goal . . . to give you the finest engraving sheet humanly possible to produce.

With the three metals now available . . . ZOMO for smoothness . . . A-Z ALLOY for toughness (it's smooth too) . . . ZOMAG (Dowmetal) for lightness and long wear, we offer you a modern trio to cover all modern needs. All three are delivered to you with FACE-KOTE and BACKOTE without extra charge.

But, we welcome your further suggestions. *Address them to the*

ATLANTIC ZINC LABORATORY
210 Van Brunt Street, Brooklyn 31, N. Y.

ZOMO ELECTRIC ZINC ◆ A-Z ELECTRIC ALLOY

aqueous acetone. Benzoyl peroxide is usable as a catalyst. Product is useful in water solution as a thickener, e.g., in printing pastes. With pine oil they are useful as detergents and flotation agents. The dehydrated and hydrogenated products are antiseptics, and dehydrated products are solvents for oils and resins. Invented by Donald A. Lister, Brunswick, Ga. Assigned to Hercules Powder Company, Wilmington, Del. Application May 11, 1945. 1 claim.

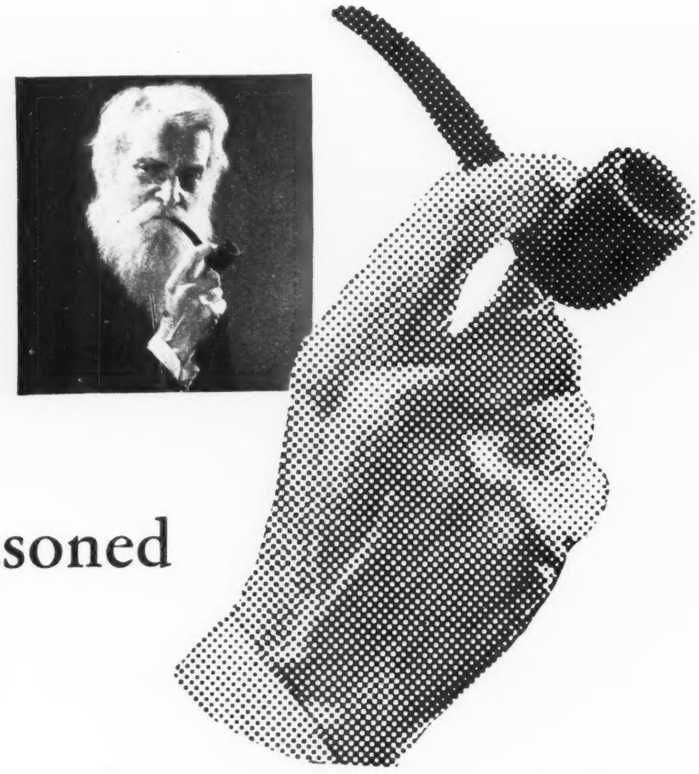
2,437,908. **PRINTING INKS** permit rapid drying of printed impressions by application of heat. The ink is comprised essentially of a coloring material such as carbon black, red lake C, a solvent, and a resinous binder for the coloring material which is soluble in the solvent. The dihydric alcohols such as alkane diols, hexandiol-2, 5, pentandiol-2, 4, and heptandiol-2, 4 may be employed as solvents. Suitable varnishes for ink compositions are prepared by dissolving a binder such as a natural or modified natural resin, or an artificial resin in an aliphatic dihydric alcohol having from 5 to 8 carbon atoms. The addition of coloring agents to varnish affords a satisfactory ink. Proportions may differ widely depending upon particular ingredients used and viscosity desired in the ink. Specking and "fill-up" is said to be eliminated. The smooth laying properties, good dot production, etc. of older glycol inks are retained. Invented by Caesar Frank Chiappe, Philadelphia, and John William Kroeger, Drexel Hill Plaza, Pa. Assigned to Fred'k H. Levey Company, Inc., New York, N. Y. Application May 22, 1946. 4 claims.

2,437,962. **DIVERSIFIED COPOLYMERS** of allyl esters of polybasic acid with saturated polycarboxylic acid are disclosed. In an example 365 parts diallyl succinate, 635 parts of diethyl fumarate, and 5 parts of benzoyl peroxide are heated together. After three hours a very hard, transparent, infusible and insoluble product is obtained. Compositions can be used for the treatment of textiles, paper and other fibrous material to produce finishes thereon, to increase strength thereof, or to assist in production of ornamental effects such as those desired in textile printing. They may also be used for adhesives, low pressure molding, and coatings. Esters suitable for use in accordance with the invention include triethylene glycol, the diallyl ester of diethylene glycol dimalonate, etc. Invented by Edward L. Kropa, Old Greenwich, Conn. Assigned to American Cyanamid Company, New York, N. Y. Application August 17, 1943. 10 claims.

2,438,091. **DIALKYL ESTERS OF N-SUBSTITUTED ASPARTIC ACID** are prepared by mixing equal molecular quantities of a primary alkyl amine having from 4 to 18 carbon atoms and a dialkyl ester of maleic acid. Mixture is reacted at temperatures not in excess of about 50° C. until all of the maleic acid ester present has reacted with the primary amine. Mixture is then heated to 50° to 100° C. to complete reaction between remaining primary amine and the fumarate ester formed from the maleic ester. Products are usable per se as wetting agents and as intermediates in the preparation of a class of superior wetting agents disclosed in companion patent No. 2,438,092 in this report. Invented by Kathryn L. Lynch, Stamford, Conn. Assigned to American Cyanamid Company, New York, N. Y. Application September 6, 1943. 5 claims.

2,438,092. **N-SULFODICARBOXYLIC ACID ASPARTATES.** Compounds such as N-octadecyl N-(disodium sulfosuccinyl) di-isopropyl aspartate, N-amoxypropyl N-(disodium sulfosuccinyl) diamyl aspartate, and N-octadecyl N-(disodium sulfosuccinyl) disodium aspartate are claimed. The products are useful in dispersing pigments and dyes in the preparation of printing paste and the like. They may be used as emulsifying aids with casein, gums, fatty acids, fatty acid esters, fatty alcohols, pine oils, bentonite clays and carbon black, etc. Patent 2,438,091, in this report, is a related patent. Invented by Kathryn L. Lynch, Stamford, Conn. Assigned to American Cyanamid Company, New York, N. Y. Application September 10, 1943. 9 claims.

2,438,909. **POLYMERS OF LINEAR FORMALS.** A process is disclosed of making polymerization products from (methoxymethoxy) ethanol. Process consists in subjecting the above to polymerization in the presence of a strong inorganic catalyst at a temperature between 0° and 150°. Thereafter the catalyst is neutralized to stabilize the polymer. The methoxymethoxy ethanol esters of succinic, and the higher aliphatic dibasic acids are polymerizable. In the preparation and use of ink the polymers may be employed in the print roll composition, as an addition agent to the ink or to the roll to improve offsetting qualities, both in the offset process and to prevent offset or smear between the sheets. They are said to be useful as emulsifying, spreading, binding, and dispersing agents, as a tack and viscosity improver, and as a livering preventative in printing inks. They may



seasoned

Burgess Mats are seasoned, too! They must be to have the uniform moisture content which results in uniform shrinkage and greater plasticity.

Seasoning at Burgess involves a 30 to 60 day period in special air-conditioned rooms where relative humidity is under constant automatic control. Careful tests are made at regular intervals to insure uniform moisture penetration of each and every mat.

The seasoning process is typical of the extreme care used in every step of manufacture of Burgess Chrome Mats—accounts for their higher quality.

A Laboratory Product BURGESS Chrome MATS

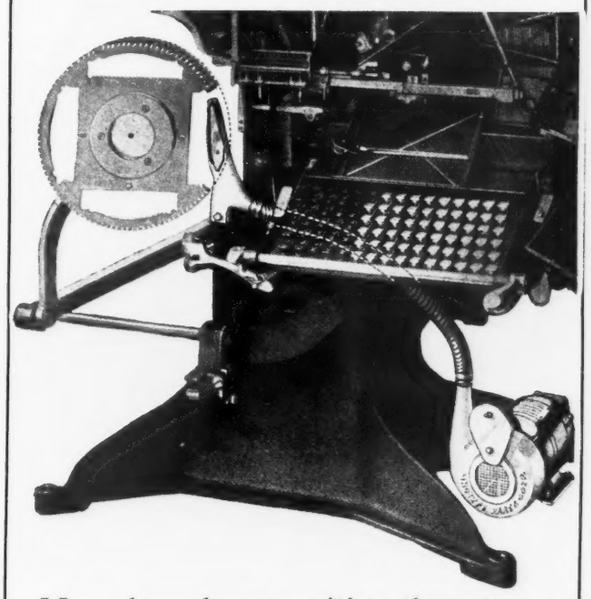
BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

FREEPORT, ILLINOIS

Back Again!

The STAR
Motor-Driven
AIR
MOLD COOLER



Many have been awaiting the return of the pioneer *STAR* AIR MOLD COOLER to the market. Here it is again with the same powerful flow of cooling air to the molds to help:

- **Eliminate porous slugs.**
- **Increase production.**
- **Decrease warping of molds and disk.**

★

Literature Available

ACE BELTS? TOPS!

PRECISION
TRADE ★ MARK

LINOTYPE PARTS COMPANY

Factory and Main Office:
SOUTH HACKENSACK, N. J.
Branch Office: 1327 BROADWAY, KANSAS CITY 6, MO.
CHICAGO • MINNEAPOLIS • DENVER

This is your BEST

Zink Cut Cement

...IT'S BOOTH'S

No question about it, the best ZINK CUT CEMENT is BOOTH'S—that's because it mounts quicker, eliminates risk of out-of-position cuts. Not only that but it holds fast, sets quickly. It is a reliable time saver for you. Comes in handy tube dispenser.

PRICES: In the United States:
75c per tube, $6.00 a dozen tubes
$5.00 a dozen in gross lots.

SPEAKING OF RUBBER ROLLS

—If you're interested in smooth, sweet-running, black rubber rolls for your line casting machines, switch to BOOTH'S BLACK RUBBER ROLLS. They are highly responsive and provide maximum cam tread friction. They too, are best.

PRICES: $1.45 per pair.
$7.75 per dozen

SEND IN YOUR ORDER TODAY

—Whether you want BOOTH'S ZINK CUT CEMENT or BOOTH'S BLACK RUBBER ROLLS or both, send your order in today. You can depend upon the quality—we can assure you of excellent service. Try these two items in your own composing room, then you too, will become a real booster for these two BOOTH products.

E. A. Booth Rubber Co.

MAHONING BANK BUILDING
YOUNGSTOWN, OHIO

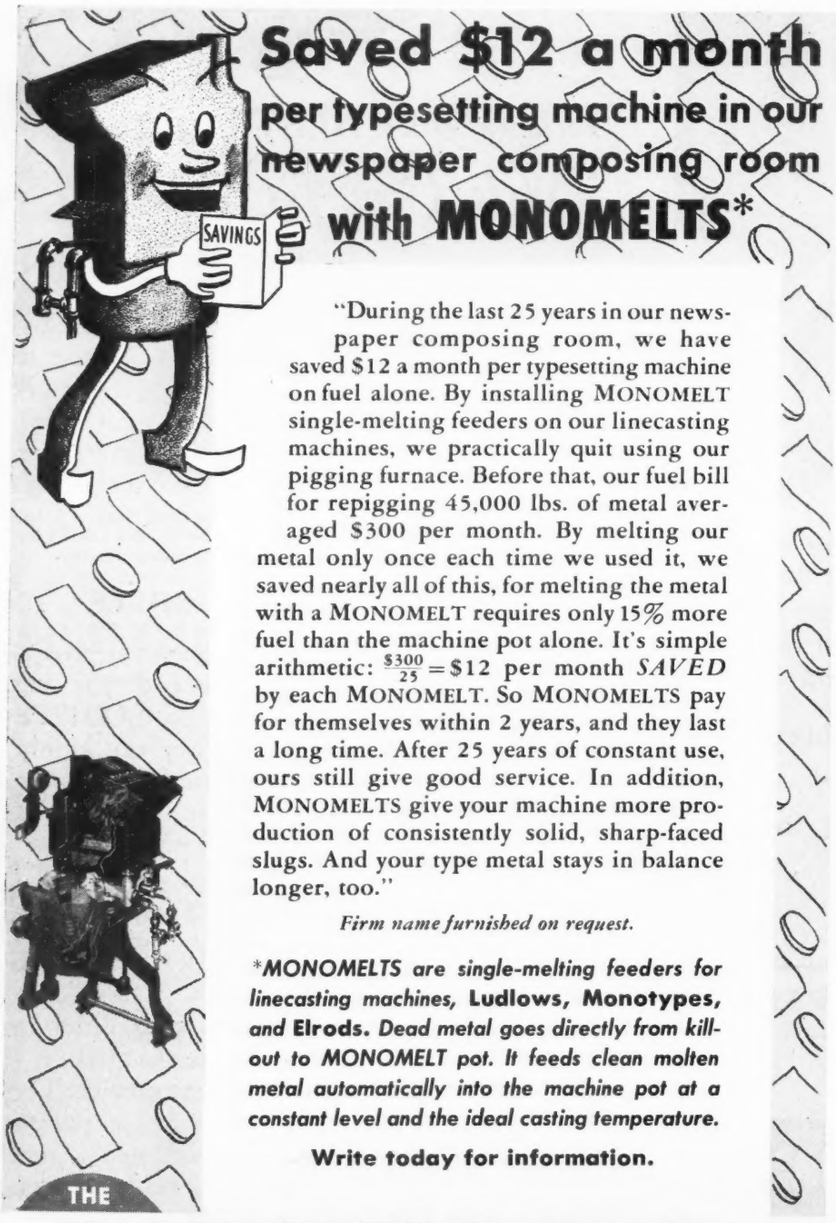
also be used as an ingredient in duplicators, either in the ink or in the pad, and as a gloss improver. Invented by William F. Gresham, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application January 8, 1945. 10 claims.

2,439,153. AZO DYES FROM DIHYDROXY BENZIDINE. A process for the manufacture of disazo dyestuffs comprises coupling in an alkaline medium a tetrazotised 3:3-dihydroxy-4-4-diaminodiphenyl with two molecular proportions of a 1-(3-sulfamidophenyl)-3-methyl-5-pyrazolone. The diazo dyestuffs are suitable for dyeing and printing the most diverse materials, especially cellulose fibers such as cotton, and for wool, silk, leather, etc. The dyestuffs are capable of forming complex metal compounds with the metals copper, cobalt, nickel, etc. These compounds may be used for coloring masses, varnishes, lacquers, resins, and spinning solutions. Invented by Fritz Straub, Kaiseraugst, and Jakob Brassel and Peter Pieth, Basel, Switzerland. Assigned to Society of Chemical Industry in Basle, Basel, Switzerland. Application August 16, 1943; in Switzerland February 18, 1941. 2 claims.

2,439,222. REDDISH-BLUE to BLUISH-RED PIGMENTS of outstanding permanence, brilliance and color value are claimed. The composite pigments comprise from about five to seventy-five percent of pigments of the halogenated isodibenzanthrone class with about ninety-five percent of blue tetrabenzotetrazaporphine pigments. The pigments are prepared by dissolving the ingredients in concentrated sulfuric acid and coprecipitating a composite pigment by diluting the mixture with water. They are usable in printing inks, enamels, and lacquers, etc. Invented by Mario Scalera and Robert E. Brouillard, Somerville, N. J. Assigned to American Cyanamid Company, New York, N. Y. Application January 25, 1946. 12 claims.

Printing Presses and Equipment

2,438,276. CONTROLLER FOR MOTOR-DRIVEN PRINTING PRESSES embodies signalling means effective for the period of time prior to starting for running or inching after a prolonged stoppage of the press while enabling restarting for inching, as quickly as progressive operation of two buttons to be pushed. The provisions for expedited starting become automatically ineffective if the period of stoppage of the press exceeds a predetermined period of time. A timing relay functions to afford the time delay, the timing action brought about by having the winding of the relay connected in a closed loop and including a suitable condenser and resistance, the loop being connected to a direct current supply line. In response to manually pushing a first push button to prepare for starting, relay moves to a given position subject to the time delay and when released has a time element incident to moving out of such position, thereby enabling restarting subject to signalling but quicker than heretofore. The effectiveness of the first relay actuated by the first button upon each starting operation thereof is dependent on a second relay switch. The latter affords a given time delay after signalling before the starting switch becomes effective but affords, for a transient period upon termination of each inching operation, reduction of such time delay in starting by repeat operation of the switches or relays. Invented by Cyril P. Feldhausen, Wauwatosa, and Robert M. Lommen, Milwaukee, Wis. Assigned to Cutler-Hammer, Inc., Milwaukee, Wis. Application June 27, 1946. 9 claims.


Saved $12 a month
per typesetting machine in our
newspaper composing room
with MONOMELTS*
SAVINGS
"During the last 25 years in our newspaper composing room, we have saved $12 a month per typesetting machine on fuel alone. By installing MONOMELT single-melting feeders on our linecasting machines, we practically quit using our pigging furnace. Before that, our fuel bill for repigging 45,000 lbs. of metal averaged $300 per month. By melting our metal only once each time we used it, we saved nearly all of this, for melting the metal with a MONOMELT requires only 15% more fuel than the machine pot alone. It's simple arithmetic: $\frac{\$300}{25}=\$12$ per month SAVED by each MONOMELT. So MONOMELTS pay for themselves within 2 years, and they last a long time. After 25 years of constant use, ours still give good service. In addition, MONOMELTS give your machine more production of consistently solid, sharp-faced slugs. And your type metal stays in balance longer, too."
Firm name furnished on request.
*MONOMELTS are single-melting feeders for linecasting machines, Ludlows, Monotypes, and Elrods. Dead metal goes directly from kill-out to MONOMELT pot. It feeds clean molten metal automatically into the machine pot at a constant level and the ideal casting temperature.
Write today for information.
THE
MONOMELT CO., Inc.
1611 N. E. POLK STREET
MINNEAPOLIS 13, MINNESOTA

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

Alternative Methods

(Continued from Page 26)

by them was a newspaper style sheet containing 40 cuts of an identical photograph taken by a newspaper photographer and produced under normal conditions in the engraving plants of newspapers in Pennsylvania, New Jersey, Maryland and Delaware. These cuts were reproduced on second-impression newsprint pages, on a stereotype plate printing press. Comparison of results

Read all about it!

Send for complete information now!
Find out all about this great new Johnson Ink—

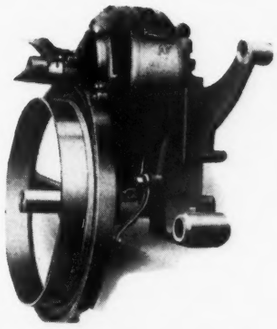
#4060 Non-Scratch Halftone Black

Please send us your name and address so we may tell you how and why this most recent, proved product of our 144 years of experience can help you to turn out superior printing at minimum cost.

CHARLES ENEU Johnson AND COMPANY
GOOD INKS SINCE 1804
10th and Lombard Streets, Philadelphia, Pa.

NEW YORK • CHICAGO • BOSTON • ST. LOUIS • CLEVELAND • DETROIT
BALTIMORE • KANSAS CITY • PITTSBURGH • ATLANTA • DALLAS

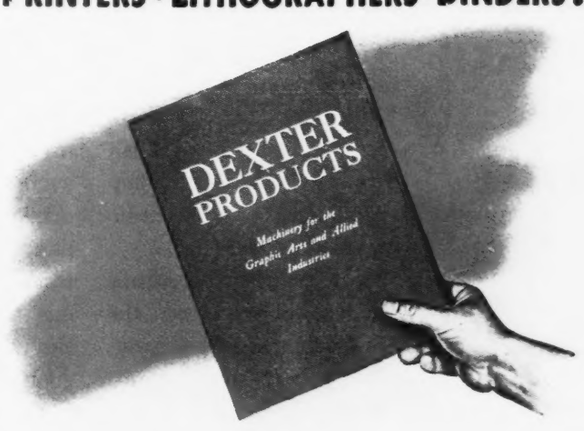
A name as old as
LINOTYPE
the
CUSHMAN *offset* MOTOR
For Linotype and Intertype



Immediate Delivery

PRECISION TRADE ★ MARK
LINOTYPE PARTS COMPANY
Factory and Main Office
SOUTH HACKENSACK, N. J.
Branch Office: 1327 BROADWAY, KANSAS CITY 6, MO.
CHICAGO • MINNEAPOLIS • DENVER

PRINTERS • LITHOGRAPHERS • BINDERS!



HERE'S A GOLD MINE of specific information about modern equipment which is speeding production and cutting costs in plants of every size and capacity. It tells about the *seven* Cleveland Folding Machines, the Christensen Gatherer and Stitcher, the Christensen High Speed Bronzer, Dexter & Christensen Press Feeders, the Christensen Varnisher, the Brackett Safety Trimmer . . . and other up-to-the-minute money-saving and money-making machines • We'll send your copy on request, along with further information on how this equipment can help solve your production problems. Please request Book No. Q-3

Dexter Folder Company
PEARL RIVER, NEW YORK

brought forth many interesting discussions and questions.

Lewis S. Somers, vice president of Imperial Type Metal Co., Philadelphia, described the methods of manufacturing engravers' zinc. He told of the great care needed to prepare this metal and to make polished sheets that will meet the requirements of the engraver.

D. B. Hollister, of the Fairchild Camera and Instrument Corp., Jamaica, L. I., took time out from demonstrating the electronic engraver his firm manufactures, to tell of this device which produces a one-column newspaper cut by mechanical means on plastic plate in 3½ min.

Suggestions for Cutting Costs

At the composing room session, Nicholas M. Fellman, Mechanical Superintendent of the Chester (Pa.) *Times*, emphasized that newspaper publishing is a manufacturing enterprise and that as such must solve many of its cost problems in the composing room, largest and most-heavily staffed of the production departments.

Hans E. Rosberg, Mechanical Superintendent of the Norristown (Pa.) *Times Herald*, said: "Copy should be sent from the editorial department in as nearly an even stream as possible—not in spasms or spurts as sometimes happens, and particularly not in one great lump just before deadline."

He believes deadlines should be given greater thought by all concerned for in these days of high and advancing costs, nothing will boost costs more than unreasonable or often-violated deadlines by advertising or editorial.

George E. Chadwick, Mechanical Superintendent of the Pottstown (Pa.) *Mercury* told how "first things come first in our ad alley." He complained that some of the advertising copy coming to his newspaper is a "crime," written on cardboard, butcher paper, etc., and to solve the problem, he thinks that: "Newspapers should have an ad service department to lay out and rewrite copy that is not legible at a glance."

Discount for Early Ad Copy

Herbert G. Taylor, Production Manager of the Bethlehem (Pa.) *Globe-Times*, described how his paper last year offered a discount for early copy. This practice has practically eliminated overtime in the office, and has provided for a more even flow of copy, puts less pressure on the men, and saves considerable costs.

William J. Easton, Engineer with the Mohr Lino-Saw Co., showed a number of slides and explained utilization of the Mohr saw for slug cutting on the Linotype and Intertype. He demonstrated how to make slugs with overhanging figures come through the knife block without slipping off the ejector blade, with or without use of the Mohr saw.

Alternative Typesetting Processes

Intense interest was shown in the portion of the composing room session devoted to new printing practices. The Vari-Typer, manufactured by the Ralph C. Coxhead Corp., was described by J. L. Carley, Philadelphia branch manager of that concern. Mr. Carley talked to a well-informed audience, since most of the men present had an opportunity to see two of these machines being demonstrated on the convention floor.

Frank DeWitt, Graphic Arts representative of the Commercial Controls Corp., described development of equipment consisting of two proportional spacing typewriters, the second controlled by tape punched on a mechanism added to the first one which is operated in the conventional manner. The second machine justifies the type on the right-hand margin as well as the left, as it retypes from the tape.

William J. Higgins, an engineer who assisted in developing the process bearing his name, attended the conference to discuss informally the "cold-type" printing process. Because of leaving the conference before his scheduled talk, he was represented by Joseph H. Zerbey, III, Pottsville (Pa.) *Republican*, and Sydney A. Lazarus, Bayonne (N.J.) *Times*, who saw this method installed on a Florida newspaper. Considerable time was given to talking about the disadvantages—as well as advantages—of this "cold-type" process.

Rubber Rollers

Ralph R. Cranmer, business manager of Williamsport (Pa.) *Grit*, national

Remember the squeaky crystal set with headphone?

Milady is charmed with modern AM and FM radio

Radio has never stood still

. . . neither has EDES

"I won't buy a set until radio is finally perfected". Remember back 25 years ago when people—foolish people—said this? They succumbed, because radio was too good to miss.

For nearly a century Edes has produced the most *uniform* and *dependable* photo-engraving metals in the world. They are being constantly improved through laboratory research — made better every year. It's time you investigated their utmost accuracy of gauge; their marked superiority in fine line, screen or halftone work; their speed in etching and re-etching. You can't definitely know how good Edes Photo-Engraving Metals are *today* until you try them.

EVERY YEAR IT'S BETTER INVESTIGATE

EDES

PHOTO-ENGRAVING METALS

EDES Engraving Metals: Regular Zinc, Hard Matrix Zinc, Triplemetal, Copper, Brass, Gravure Sheets

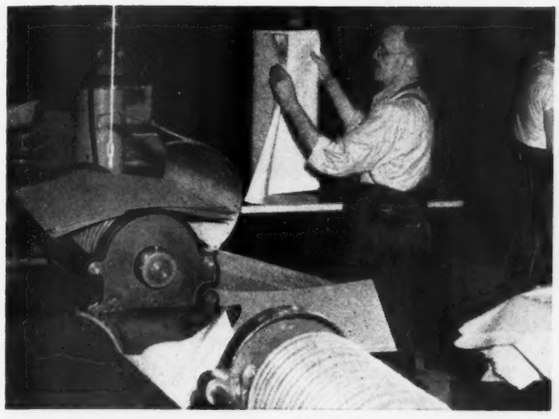
THE EDES MANUFACTURING COMPANY, Plymouth, Mass., U.S.A.

New York Representative, R. P. BICKFORD, Room 2118, 420 Lexington Ave., New York ● *Distributors*, G. C. AMENTA, 5842 North Leonard Ave., Chicago 30, Illinois ● GEORGE R. KELLER, 1329 N Street N.W., Washington, D. C. ● CHEMCO PHOTOPRODUCTS CO., New York, Atlanta, Dallas, Chicago, New Orleans, Boston ● ALLAN B. CROKE CO., Boston ● W. OLIVER TRIPP CO., Boston ● C. S. ILLINGWORTH, Buffalo ● G. C. DOM SUPPLY CO., Cincinnati ● J. W. FEINSTEIN, San Francisco ● MID-WEST PHOTO ENGRAVERS SUPPLY CO., St. Louis ● THOMPSON-HAYWARD CHEMICAL CO., Kansas City ● E. H. WALKER SUPPLY CO., Washington, Richmond

SYNTRON

"VIBRATING"

PAPER JOGGERS



3 to 4 Times Faster!

Reduce handling of all types of paper—from onionskin to heavy board—by eliminating slow, laborious hand pounding and riffling.

They'll save you money and time—write for illustrated folder.

SYNTRON CO., 577 Lexington, Homer City, Pa.

SMOOTH NEWSPAPER PRINTING PRODUCTION

WITH **ROYAL ROUTING CUTTERS**

Red Label High Speed is the highest grade Royal Cutter . . . made from chromium-tungsten high-speed steel, carefully heat treated and tempered. Available in all styles for stereotype, electrotype and photo-engraving.

WITH **EASTERN ROUTER BELTS**

Machine woven in one piece. No joints, laps or seams mean smooth operation even at high speeds . . . with uniform strength, long-life and trouble-free performance. Treated in all sizes up to 60" with a special high coefficient treatment for maximum traction at higher speeds

WITH **EASTERN CIRCULAR SAWS**

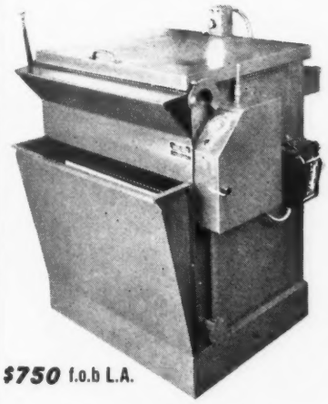
These high speed steel, top quality saws are available in hollow ground or straight tooth especially suitable for composing rooms and stereotypes. Sizes range from 6" (trimmer saw) to 8", 9" and 10". 1", ¾" and ⅝" arbors.

- **DIRECT PRESSURE MOLDING MATERIALS**
- **COMPOSING ROOM & STEREOTYPE EQUIPMENT**
- **PRESS BLANKETS**

PLACE YOUR ORDER TODAY!

EASTERN NEWSPAPER SUPPLY, INC.
9603 Northern Boulevard, Corona, L. I., New York

SHRINK-O-MATIC



$750 f.o.b L.A.

- Automatic controlled shrinkage
- Matrix automatically ejected
- Time range to three minutes in seconds
- Heat range 200° to 500°
- Requires no attention, watching
- Standard electrical equipment built in
- Automatic starting of time cycle

No Bells • No Horns • No Buzzers

LOW IN PRICE—EARLY DELIVERY

A PRODUCT OF

Platemakers EQUIPMENT CO.

7730 MAIE AVENUE • LOS ANGELES 1, CALIF.

DEALER INQUIRIES INVITED

THE COUNTRY CLUB SEASON TESTS PICTURE REPRODUCTION

Pretty particular folks, these country club ladies . . . influence too! Their dads and husbands control a lot of business . . . They are more pleased than they admit when a society page layout shows them in flattering poses . . . But the reproduction had better be good! No washed out figures nor black, smeary faces . . . Certified Mats help, with their fine gradation and excellent modeling of the photographic image.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

weekly newspaper of 700,000 circulation, welcomed the PNPA conferees to the Saturday morning session. Cranmer, who also is active in ANPA mechanical conference affairs, was assisted by a panel of experts, including his press foreman, J. Arthur Klatte. Mr. Klatte, in commenting on the use of rubber rollers, remarked it is necessary that form rollers be set so that they are driven by the plate cylinders; that slippage between form rollers and plates results in an uneven transfer of ink to the printing plate and is reflected on the printed page. Mr. Klatte stated some of the original rubber rollers furnished with the press are still in good condition after 13 years of use, and have had as many as eight regrindings. The form rollers usually swell about $\frac{1}{16}$ in. in two years. Rollers are reground when they begin to show rule marks, swelling or a spotty surface. Form rollers and distributors are polished after grinding.

PNPA Mechanical Conference Discussion — (Seated): Theodore A. Serrill, PNPA Associate Manager in Charge of Industrial Relations; D. Phillip Young, a practical printer and publisher of the York (Pa.) *Dispatch*. Young bears the reputation of having attended every ANPA and PNPA Mechanical Conference since their inception; J. R. Cubbison, Photo-engraving Manager, Sharon (Pa.) *Herald*. (Standing, left to right): Allen R. Spurgeon, Manager, Printing Dept., Uniontown (Pa.) Newspapers, Inc.; N. DeWitt Ray, Co-Publisher, Indiana (Pa.) *Evening Gazette*.

Send $25 AS DEPOSIT ONLY

FOR TWO WEEK TRIAL OF THE FAMOUS HEAVY DUTY *SUPER SPEED 7* SAW TRIMMER! MONEY BACK IF NOT SATISFIED

$345.00

Complete with pedestal, material storage bin, dump truck, ALL-PURPOSE SAW BLADE, and AC 110V, single phase, 60 cycle motor equipment. FOB Cleveland, Ohio

TURNER'S HEAVY DUTY

SUPER SPEED 7

SAW TRIMMER

WHAT TO DO—
Send the coupon attached with a $25. check or money order evidencing good faith. Give the Super Speed 7 Saw a two week trial. If not entirely to your satisfaction, return to us and your deposit will be refunded.

WE PAY FREIGHT when full payment accompanies order.
IMMEDIATE DELIVERY! ORDER AT ONCE!

MAIL THIS TODAY

TURNER PRINTING MACHINERY INCORPORATED

Cleveland • Chicago • Detroit

TWO WEEK TRIAL

TURNER PRINTING MACHINERY, INC.
2632 Payne Avenue - Cleveland 14, Ohio

Signed_____

Company_____

Address_____

City_____ State_____

Non-felt vs. Felt Blankets

Black-top non-felt blankets are satisfactory, and are preferable to the black-top felt blankets, was the observation of John G. Fletchinger, pressman on the Greensburg (Pa.) *Tribune-Review*. Mr. Fletchinger, who served on the pressroom session panel, said felt blankets were not too satisfactory. He gave as his reasons the fact that this type blanket is too soft, thus giving and stretching; also the coating peels from the felt unreasonably soon. His preference for the felt top is the hard blanket with a soft cork underneath. This results in a firm cushion that reproduces halftones and solids more clearly. He says that in this type creeping and stretching is reduced to a minimum. Participating with Messrs. Klatte and Fletchinger, was Cyril Moran, press foreman of the Scranton (Pa.) *Tribune* and *Sunday Scrantonian*. These men were called upon to give their views in answer to several questions from the interested audience.

Stereotype Session

Caspar C. Kean, recently promoted from press-stereo foreman to Mechanical Superintendent of the Philadelphia Suburban Newspapers, Inc., publishers of four suburban weeklies of 60,000 total circulation, served as chairman of the stereotype session. He opened the discussion by telling of the excellent results obtained from a recently installed pony autoplate. "It saves time and eliminates much of the "brute work" in the stereo department," he emphasized.

Joseph Lynch, stereotype foreman of the Gannett Color Press, Rochester, N. Y., described how he started from "scratch" to develop techniques in stereo work for the exacting demands of color-comic printing for the Gannett newspapers. His experience revealed that fullest utilization of machinists' skills plus common sense have shown that there is no mystery to good newspaper color, particularly spot color in advertising.

200 FACES

ARE AVAILABLE FOR IMMEDIATE DELIVERY

☆ ☆ ☆

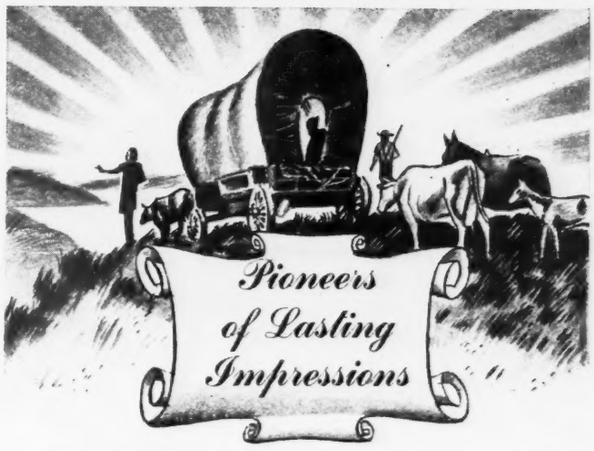
That is the number of type faces carried in stock, many of them exclusive designs available only at L. A. Type. We can also furnish Spanish accents for most of the fonts. All type is cast from hard foundry metal to rigid specifications and correct alignment. Write to the West's largest type foundry for a free copy of our new specimen price list.

PRECISION CAST TYPE

L. A. TYPE

AND RULE COMPANY

225 EAST PICO BOULEVARD • LOS ANGELES 15



The covered wagon of American pioneers marked an era of achievement. Wood's development of the first domestic dry mat pioneered an industry. Today, with critical control and modern equipment, it's natural for Wood to lead.

Sample Mats Sent Free Upon Request

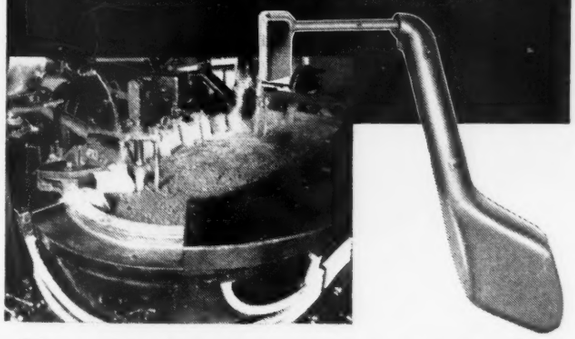
WOOD FLONG CORP.

Oldest In The Country — First In The Field

HOOSICK FALLS • NEW YORK

New York City Office: 551 Fifth Ave., New York 17, N. Y.

MODERN, EFFICIENT STEREOTYPE MELTING DEMANDS G-E IMMERSION HEATERS



More and better castings . . . cleaner, cooler working conditions . . . minimum dross—get all these at low cost with G-E Calrod* immersion heaters in your stereotype-melting furnace. Immersed directly into the stereotype metal, these heaters give faster heat and more uniform heat distribution. With automatic controls, they provide closer, more efficient temperature regulation.

Whether you are modernizing your present plant or planning a new one, you'll want to investigate how you can convert quickly and easily to the modern electrical way of stereotype melting. The Heating Specialist in the nearest G-E Office will be glad to discuss this with you.

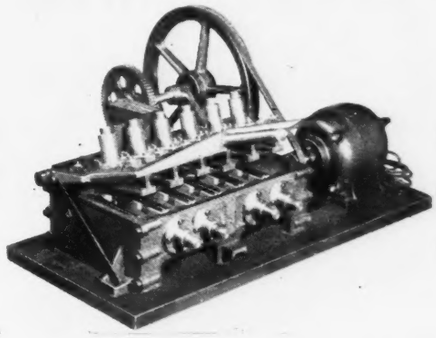
In the meantime, **write for free bulletin GEA-4653.** *General Electric Company, Schenectady 5, N. Y.*

**Reg. U.S. Pat. Off.*

GENERAL ELECTRIC

675-161

CLEAN and GRAPHITE SPACEBANDS MECHANICALLY!



SOFNAS SPACEBAND CLEANING MACHINE

- **Cleans entire length of spaceband.**
- **Saves energy and the matrices.**
- **The ease made possible encourages cleaning spacebands as often as standard practice requires.**
- **Cleans six spacebands at a time thoroughly and safely by the undisputed principle employed in the hand method, with the added advantage of mechanical uniformity.**

SOFNAS BROS.

45 Hendricks Place **P. O. Box 5227**

Indianapolis 1, Ind.

Group at PNPA Mechanical Conference — (Left to right): John J. Fletchinger, Press Foreman, Greensburg (Pa.) *Tribune and Review;* Wm. J. Easton, Engineer, Mohr Lino-Saw Co.; D. B. Hollister, Fairchild Camera and Instrument Corp.; J. L. Stackhouse, Publisher, Easton (Pa.) *Express* who is also Chairman of the ANPA Mechanical Committee; John T. Arnold, Mechanical Supt., New Brunswick (N.J.) *Home News.*

Ralph E. Leuchtner, press-stereo foreman of the Pottsville (Pa.) *Republican*, and a man with a quarter-century of experience in the pressroom of that paper, mostly on twin-Duplex equipment, also served on the panel and answered several questions asked by the conference group.

"Stay Within Reasonable Shrinkage"

"Stay within a reasonable mat shrinkage, say $^3/_8$ in.," was the advice of J. Harold Mintun, Production Manager of the Pittsburgh *Post-Gazette*, who then went on to tell how he and his department heads worked out the problems of cutting roll widths to save more than $35,000 a year in newsprint by increasing shrinkage, using narrower margins, reducing width of column rules, etc. A study he made of Pennsylvania newspapers, indicated that a score or more of the dailies can save on print by doing away with 6 pt. rule, closing up margins, such as the *Post-Gazette* and other Keystone state and other area dailies have done or are doing. He cautioned that publishers and their production departments must bear in mind that some of the devices used to save on newsprint call for a sacrifice in quality of the finished product—the newspaper.

"Manufacturers Too Busy"

"We see all too little of newsprint quality during these days of newsprint scarcities," J. P. Grant, Mechanical Superintendent of the Philadelphia *Bulletin*, told the conferees. He continued "I believe that the manufacturers are much too busy trying to meet excessive demands for their product to allow considerations of quality to be a serious hindrance to quantity." Grant, who has had several years' experience in newsprint manufacture before becoming a newspaper production executive, reviewed the basic fundamentals of good print, namely constancy of whatever quality characteristics a given supplier's product possesses; surface—a soft smooth surface that will take plenty of impression; color—a blue-white which gives the effect of brightness when used with newspaper ink; opacity, or lack of transparency, the more of which we can obtain, the better the newspaper printing.

Rebuilding Matrices Not Recommended

Paul V. Driscoll, Vice Chairman of the PNPA Mechanical Committee, and Mechanical Superintendent of the Connellsville (Pa.) *Courier*, assumed charge of the Conference with the Saturday luncheon. Theme of this portion of the

OFFERED NOW!!

"RUST-PRUF" *Black Beauty*

GALLEYS!!

Exclusively and specially processed tough 18-gauge Super Steel embodying superior accuracy and strength in construction. Exhaustive tests prove this distinctive galley immune to temperature or atmospheric conditions.

8¾x13 per 100.....$55 10x16 per 100.....$75
12x18 per 100.....$89 6¼x23½ per 100....$73
(Superior finish, top quality plain steel deduct $5)

GALLEY CABINETS!!

100-galley Capacity All Steel 18 Gauge Sturdy Construction —Superior Craftsmanship—Smartly Finished in Traditional Green Baked Enamel—Numerically Marked Tiers—Conform to Adopted and Accepted Standards in Construction, Sizes and Design.

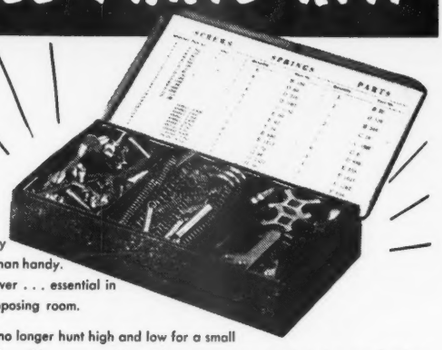
8¾x13.....$59 10x16.....$74
12x18.....$81 6¼x23½.....$77

"BUILT LIKE A BATTLESHIP"
NOTHING BETTER AT ANY PRICE
(PRICES SUBJECT TO CHANGE WITHOUT NOTICE)

DEALER INQUIRIES INVITED

PRINTERS' RULE COMPANY, Inc.
Manufacturers to the Printing Industry Since 1928
147 N. Broadway Broadway 0732 Milwaukee 2, Wis.

SAVE OVER 1/3 on this EMERGENCY SMALL PARTS KIT!



This LINSCO Emergency Small Parts Kit is more than handy. It is a valuable time saver . . . essential in any well equipped composing room.

With this kit, you need no longer hunt high and low for a small spring, screw, or part. Everything you need for such an emergency is included: assorted springs, screws and parts, separated in compartments, with a printed card on which to keep a running inventory of contents.

And every part is a LINSCO *precision part.* Send for this kit today . . . you may need it tomorrow.

Individual price value . . . $8.25. Complete kit $6.00. You save $2.25!

LINSCO PRECISION PARTS EST 1914

LINOTYPE SUPPLY CO.
INCORPORATED
337-341 CANAL ST., NEW YORK 13, N. Y.
CANAL 6-0196, 0197

Printing Profits from Planning

Profits and progress inevitably result from carefully detailed planning and experienced engineering, as proved conclusively by our thirty years devoted to the development of dividend-earning procedures for leaders in the graphic arts industries.

Whether you need a new plant or rehabilitation and modernization of present facilities, our complete analysis and factual report will define your needs.

ASK OUR CLIENTS ABOUT US . . . ASK US ABOUT OUR CLIENTS

MORTON L. PEREIRA and Associates
Engineers • Architects
100 West Monroe Building
Chicago 3

You Can Save
BY RENEWING WORN MATRICES

Here's one way you can cut composing room costs. Install a Curle Matrix Anvil and Tool Gauge Assembly. With this assembly you can quickly recondition mats for smooth accurate service. You will find that it's easy to use, that it soon pays for itself and keeps your equipment running continuously and efficiently. Every composing room should have these precision tools.

Write Today for Descriptive Folder and Prices

GEORGE L. CURLE
Manufacturer of Composing Room Specialties
4th and Zenith Ave., So. • Minneapolis, Minn.

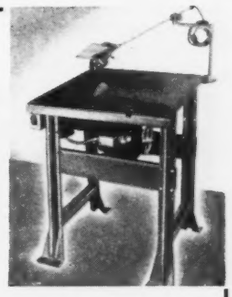
How to
Sell Used Equipment
Buy Used Equipment
Get New Help . . .

If you have equipment which you wish to sell or you are in the market for certain used equipment, you save time and money by advertising in PRINTING EQUIPMENT *Engineer* Classified Department. If you are looking for competent help or you are a mechanical executive wanting a new location, your best bet is to advertise in our Classified columns. PRINTING EQUIPMENT *Engineer* reaches 10,000 mechanical and production executives — just the men who are interested in equipment and personnel.

TINGUE
TRADE MARK
PRINTING PRESS BLANKETS AND DRAWSHEETS

TINGUE, BROWN & CO.
114-120 EAST 23rd ST., NEW YORK 10, N.Y. 723 E. WASHINGTON BLVD., LOS ANGELES 21, CAL.
1227 WABASH AVE., CHICAGO 5, ILLINOIS 507 PETERS STREET, S.W., ATLANTA, GA.
CANADIAN SALES AGENTS ROSS WHITEHEAD & CO. LTD. MONTREAL, CANADA

The **NEW**
ROCO Stereo-Saw

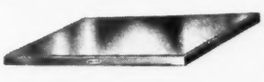


Will give a life-time of good sawing at minimum investment. For a soundly engineered, strongly built saw designed for heavy duty, choose the new ROCO Stereo Saw. NOT a contraption or a stereotyper's nightmare loaded down with high-cost gadgets

Has everything you need, nothing you can get along without. **BUILT RIGHT—PRICED RIGHT.** *Write:*

William B. Edmondson Co.
1264 COMMERCIAL TRUST BLDG.
PHILADELPHIA 2, PA. *or* **NEWPORT, PA.**

IMPOSING SURFACES
Mirror-Smooth, Perfectly Level



All Steel Construction
Heavily Reinforced

Nolan all-steel precision ground imposing surfaces help reduce composing time and cut costs. These mirror-smooth surfaces promote speed and accuracy in make-up and lock-up. Available in any size up to 196", with or without rabbet.

Write for Literature and Price List

NOLAN CORPORATION
1331 East Dominick St.
ROME, NEW YORK
Manufacturers of Finest Quality Printing Equipment

SHOOTING AIR
TORNADO
1⅓ H.P. Electric Blower

CLEANS SAFELY interiors of motors and other intricate machinery with a powerful *320 m.p.h. air steam* of pure, dry concentrated air from any electric outlet.

MOST POWERFUL portable electric blower available. Acts instantly to sweep away dirt, dust, lint, fuzz from motors, bearings, gears, and moving equipment. Keeps mechanisms smooth-running-free from friction.

WRITE FOR LITERATURE or FREE DEMONSTRATION

BREUER ELECTRIC MFG. CO.
5134 Ravenswood Ave. Chicago 40

program was a discussion of *Systems, Production and Step-Savers*, for the small-city newspapers. Assisting him was George T. Wegemer, Mechanical Superintendent of the St. Mary's (Pa.) *Press*, and a panel comprised of E. Ashnum Parsons, sr., Towanda (Pa.) *Daily Review*; Eugene Connors, Warren (Pa.) *Times-Mirror*; John Halstead, Charleroi (Pa.) *Mail*; William O. Barr, *Simpsons' Daily Leader Times* of Kittanning, Pa., and Clifford R. Jones, Sayre (Pa.) *Evening Times*. All these men represented papers of less than 10,000 circulation, excepting Mr. Driscoll, whose publication first exceeded this figure last Fall.

Another Luncheon Group at PNPA Mechanical Conference—(Left to right): Lewis S. Somers, Vice President, Imperial Type Metal Co.; Stanley Myers, Asst. Mechanical Supt., Philadelphia *Bulletin;* C. D. Manning, Vice President, Kellogg Switchboard and Supply Co.

Discussion brought out that the Carlisle (Pa.) *Sentinel* and the *St. Mary's Press*, were using the glass-bead draw sheet introduced last year. Both these publications, with flat-bed presses, found that offset is eliminated by about 75%.

Rebuilding of linotype matrices was not recommended by Mr. Halstead, who told how the heavier mats, once rebuilt, held up, but that the lower case i, t and other thin letters broke down rapidly.

Several present recommended the use of an air compressor in the composing room, telling of its many uses in addition to providing air for cleaning up machines.

Most of the smaller-city papers read advertisers' proofs in the shop and do not provide proofs for the advertisers to read and return.

One recommendation for composing rooms with worn base, was to buy a special thickness casting bar for making shell cast base, thus eliminating need to build up the cast.

One superintendent told how a 6 in. spike made a good tool for pushing down the shoulders on the back of mats. Very few of the smaller-city papers gave special attention or preparatory work to mats before casting, other than providing proper backing with felts.

It was suggested that many problems of the stereo and composing rooms can be eliminated with the purchase of a shaver, assuring that all casts will be type high.

Chairman Driscoll told how newspapers in recent years had come a long way in improving cleanliness and sanitation, better lighting and more modern equipment to perform the work of newspaper printing.

Entertainment was provided at the Friday night dinner meeting by the manufacturers and suppliers' representatives. This portion of the program was in charge of Millard C. Pintard, William C. Herrick Ink Co., who headed a committee which obtained the refreshments, music and brought Howard Klein, an internationally-known hypnotist, to perform before the audience.

NEW and USED

NEWSPAPER PRESSES PRINTING EQUIPMENT

BEN SHULMAN
500 FIFTH AVENUE
NEW YORK 18, N. Y.
BRyant 9-1133

WISE Buys

2 Model K Linotypes, Rebuilt and guaranteed.
Model 5 Linotype, Rebuilt and guaranteed.
Model 19 Linotype, Rebuilt and guaranteed.
25 x 38 Premier Cylinder Press, rebuilt.
Monotype Caster, strip material attachment, 3 new adjustable molds, casts up to 36 pt. inclusive, factory re-built.
2 Kelly Automatic Jobbers, one with extension delivery, re-conditioned.
38" Acme Power Paper Cutter.
24, 30 and 48 Pt. VOGUE BOLD COND. Caps and lc, for 72-Channel, New.
50 fonts, slightly used mats. Ask for mat list.

William J. Wise
Printing Machinery & Supplies
32 Blvd. of Allies
PITTSBURGH 22, PA.

Klingrose Machine Corporation
150-20th STREET, BROOKLYN 32, N. Y.
MANUFACTURERS OF
Roto Gravure Printing Presses

GEO·H·MORRILL
GENERAL PRINTING INK DIVISION
WORLD'S LARGEST MANUFACTURER
OF NEWSPAPER INKS
FOUNDED 1840
Sun CHEMICAL CORPORATION
NEW YORK • BOSTON • CHICAGO • DETROIT • ST. LOUIS
FORT WORTH • LOS ANGELES • SAN FRANCISCO • SEATTLE

CLASSIFIED ADS ALL CLASSIFICATIONS

$.75 per line 1.9/16" wide. Minimum ad 5 lines, 25 characters per line. Cash with order.

CLOSING DATE—15th of Month preceeding Date of Issue.

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

SALESMAN WANTED

Well established and expanding West Coast manufacturer of composing room and stereotype machinery desires to add competent salesman to its organization. Applicant must be not over 40 years of age; and preferably have had a mechanical or technical background of experience in the publishing industry. College degree desirable. Emphasis will be placed primarily on sales ability, with observation of trends and needs for new products an important adjunct. Considerable traveling will be required, chiefly in West Coast states. Starting salary commensurate with qualifications, with opportunity for substantial increases. Address communications to Box No. 304, *Printing Equipment Engineer.*

SHEET CUTTER FOR SALE

56" Hamblet sheet cutter, with Maxson Lay-Boy and signal counter. Machine and Lay-Boy can handle 60" minimum and 84" maximum lengths. Complete with drive and motors. For details and price information write G. G. Bolotin, Controller, Clopay Corporation, Cincinnati 14, Ohio.

FOR SALE

Miehle Vertical V-50, serial No. V 11616. Purchased new 1941. Serviced exclusively by Miehle factory representatives with Miehle parts. Available in August.

Also Ludlow Lining Plate Gothic Mats, Heavy—6-LHP, excellent condition, 6 point numbers 1, 2, 3, and 4; 12 point numbers 1, 2, 3, and 4.

HEDERMAN BROTHERS
Jackson, Mississippi

American Assembling Machine, Rowe Trimmer Serial No. 106 with 208 Volt, 3 phase, 60 cycle motor equipment. Excellent for side stitch work. Minimum size 6" x 9", Maximum 10½" x 13½". For delivery, approximately 60 days. Reply Box 306, *Printing Equipment Engineer.*

Two New Kluge Automatic Platen Presses, size 12 x 18 and 10 x 15 scheduled for delivery shortly at pre-war prices. Contract, including $100 down payment, available at $300.00. Reply Box 307 *Printing Equipment Engineer.*

Hoe Web offset jobber press, new uncrated, 8½" cutoff, width rolls 10" to 14", 30,000 impressions per hour at factory price, $6400. Reply Box 305, *Printing Equipment Engineer.*

Spacebands, Spacer Rings, Paper Drills, Proof Presses, Eyeletting Machines . . .

Immediate Delivery - Agents Wanted

SCHNEIDER CO., LTD., DIETIKON, SWITZERLAND

100% AUTOMATIC SLUG SAWING

Odd measure slugs sawed to any measure as ejected from linecasting machine. Fast-accurate-economical.

MOHR LINO-SAW CO.
128 N. Union St. Chicago

MOHR SAW

LETTERPRESS • ROTOGRAVURE • OFFSET
ANALINE • WEB-DRYING-APPARATUS

B. OFFEN & CO.

168 N. Michigan Ave. Chicago 1, Illinois

SAFETY·RELIABILITY·ECONOMY

CLINE
PRESS DRIVES and CONTROL Reels, Tensions and Pasters . . .

CLINE SYSTEM

CLINE ELEC. MFG. CO.
Chicago: 400 West Madison St.
New York: 220 East 42nd Street
San Francisco: 410 Bush Street

THE WALTER W. MEZO COMPANY

Used Rotary Newspaper and Flat Bed Web Perfecting Presses, Magazine, Color, Gravure Presses and Auxiliary Equipment.

Manufacturers' Agents for

New Equipment—Directomat, Chases, Form Tables, Saws, Routers, Casting Boxes, Furnaces, Composing Room Equipment, Monomelts. Stereotype Supplies, Ink Handling Equipment, Hydraulic Paper Cutters

400 W. Madison St. Chicago 6, Illinois

BAUM FOLDERS

RUSSELL ERNEST BAUM

615 Chestnut Street Philadelphia, Pennsylvania

RICHARDS *Since 1900*
KALAMAZOO, 13F

Saw-Trimmers, Flat and Curved Plate Routers, Stereotype Saws and Mortisers, Steel Rule Dies.

The most complete line built. See our page ad July issue or ask for catalog.

★ **STAR CUT CEMENT** ★

Since 1936 — *For Mounting* — Since 1936

CUTS...STEREOTYPES...ELECTROTYPES

65c per tube-$5.50 per doz. $5.00 per doz. in two doz. lots, $4.50 per doz. in gross lots.

★ STAR CEMENT COMPANY ★
45 Malone Avenue, BELLEVILLE 9, N. J.

EQUIPMENT FOR PRINTERS

Mitering machines • Composing sticks • Slug clippers • Band saws • Lead and rule cutters • Newspaper bases, files and racks.

H. B. ROUSE & COMPANY

2214 North Wayne Ave. Chicago, Illinois

REID MAGAZINE RACKS

FOR LINOTYPE AND INTERTYPE

Also New and Used Motor Drives

Order from

William Reid Co., 2271 Clybourn, Chicago 14, Ill.

Why the cow jumped over the moon—
they did not have a new Reid milking machine.

BOOKS

RECEIVED

Directories for Publicity Men

WORKING tools which provide inquiry and sales producing opportunities for advertising, sales promotion, publicity and public relations men are the new *Publicity Data Books* that tell what kind of releases business papers, consumer publications, and farm papers—domestic and foreign—will print. Only those publications that give editorial reference to new products, new literature, etc., are listed. For each publication, the publicity man is given the exact requirements: type and length of material wanted, type of illustrations accepted, and the department or editor (by name) to whom the releases go.

The *Free-Publicity Data Books* are spiral-bound to open flat. Each book is furnished with a digest of comments from trade paper editors. Twenty-six "do's and don'ts" are tabulated.

The Trade Paper directory, alphabetically arranged under 168 market classifications is priced at $25. The Consumer and Farm listings sell for $10 and $5 respectively. All books sold subject to five days free trial. Source: George Boyles, Advertising, 1006 Portage St., Kalamazoo 7, Mich.

Sixth Annual Keepsake

THE simplicity of makeup is the beauty of The Maple Press's Sixth Annual Keepsake. *Printing Equipment Engineer* has been fortunate to receive these Keepsakes annually. The annual limited editions bestowed upon customers and an appreciative audience seem to warrant continued activity in fine printing. This year's Keepsake is entitled *The Nine Capitals of the United States*. Frankly, we're not commenting upon the quality of the subject matter—we'll leave that to qualified authorities. We'll dismiss the author, Dr. Robert Fortenbaugh, with the comment that we found the book most absorbing. In the book is presented an account of some significant history related to the Early Years of our Independence.

Our reviews mostly are limited to technical comment regarding well printed books. As has been stated above, the beauty of this year's Keepsake is in the simplicity of makeup. We think Vice President Howard N. King of The Maple Press did an outstanding piece of book designing.

The book itself consists of 106 pages with hard bound covers. Size is 7¼ in. wide by 10½ in. high. Paper stock used is 25x38-160M White Laid Old Stratford Book for the inside. For the cover and end sheets, Chartruse Tweedweave 26x40-175M stock was used. The cover is one-quarter-bound with brown linen finish cloth stamped on the backbone with red and gold label. It can be seen that, unlike some of Mr. King's other productions, the color combination is well restrained.

The type matter was set in 14 pt. Baskerville with italic leaded 4 pts. Quotation material set in 12 pt. Baskerville leaded 3 pts. Each type page measures 26 picas by 42 picas deep. Top folios are set in 14 pt. Baskerville Italic. On each page, between the top folio and the text is inserted a fine wave rule printed in brown ink.

At the head of each chapter is a line drawing of the capitol building in use at the time, according to the city in which the capital was located. These are printed in black, tawny yellow and tan ink. The technique reminds one of each picture being lifted out of some old archive. Art work is by Fritz Kredel of New York, N. Y.

A limited number of *The Nine Capitals of the United States* is available at $4.50 per copy. Orders may be sent to The Maple Press, York, Pa.

ADVERTISERS' INDEX FOR MAY 1948

	Page
American Gas Association	6
American Type Founders	8, 9, 13
Atlantic Zinc Laboratory	43
Baum, Russell Ernest	55
Beveridge Paper Co.	38
Bingham's, Sam'l, Son Mfg. Co.	4
Booth, E. A. Rubber Co.	45
Breuer Electric Mfg. Co.	53
Burgess Cellulose Co.	44
Certified Dry Mat Corp	49
Challenge Machinery Co.	41
Chandler & Price Co.	11
Cline Electric Mfg. Co.	55
Cottrell, C. B. & Sons Co.	35
Curle, George L.	53
Dayco Roller Div., Dayton Rubber	15
Dexter Folder Co.	20, 47
Edes Mfg. Co., The	48
Eastern Newspaper Supply Co.	49
Edmondson, William B., Co.	53
Electric Boat Co., Printing Machinery Div.	18
General Electric Co.	51
Goss Printing Press Co., The	14
Hammond Machinery Builders	39
Harris-Seybold Co.	Inside Front Cover
Ideal Roller & Mfg. Co.	16
Imperial Type Metal Co.	21
International Printing Ink	12
Intertype Corporation	Outside Back Cover
Johnson, Charles, Eneu & Co.	47
Klingrose Machine Corp.	54
Lake Erie Engineering Co.	20
Linotype Parts Co.	45, 47
Linotype Supply Co., Inc.	52
Los Angeles Type & Rule Co.	51
Ludlow Typograph Co.	7
Matrix Contrast Corp	22
Mergenthaler Linotype Co.	37
Mezo, Walter W., Co.	55
Miehle Printing Press & Mfg. Co.	17
Miller Printing Machinery Co.	3
Mohr Lino-Saw Co.	55
Monomelt Company	46
Morrill, Geo. H., Div., General Printing Ink	54
Morrison Company	40
Nolan Corporation	53
Offen, B., & Co.	55
Pereira, Morton L. & Associates	53
Platemakers Equipment Co.	49
Printers' Rule Co., Inc.	52
Reid, William Co.	55
Richards, J. A., Co.	55
Rouse, H. B. & Co.	55
Schneider Co., Ltd	55
Scott, Walter & Co.	Inside Back Cover
Shulman, Ben	54
Sofnas Bros.	51
Sta-Hi Corp	1
Star Cement Co.	55
Syntron Company	49
Tingue, Brown & Co.	53
Turner Printing Machinery, Inc.	50
U. S. Radium Corp	2
Vandercook & Sons, Inc.	19
Wise, William J.	54
Wood Flong Corp	51
Wood Newspaper Machinery Corp.	10

SCOTT

"The Modern Newspaper Press"

• The Scott Extra-High-Speed Printing Unit employs the most modern gearing—special automotive type alloy gear steel, heat treated, hardened and lapped—the most powerful and quietest gearing on any press.

• The Printing Cylinders of solid forged steel, relatively short and with 6½ inch diameter roller bearing shafts of special design produce the most rigid and uniform impression.

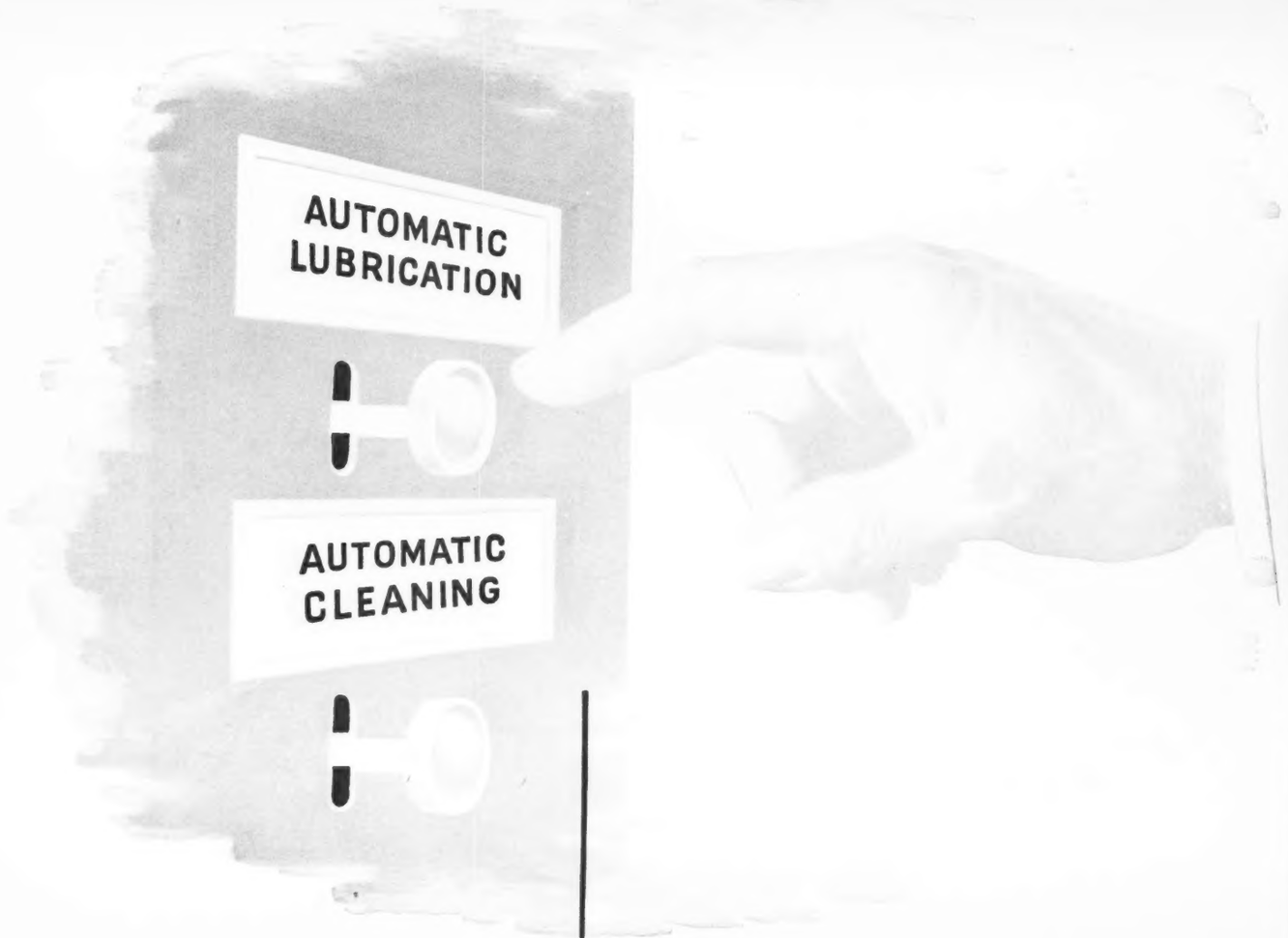
• The Scott Ink Distribution inks the pages so uniformly, regardless of speed, that it is difficult to pick out slow motion copies from top speed production. The most nearly uniform inking of any newspaper press.

• The Scott 3 and 2 Ratio Folder handles all types and sizes of products better. The inside sections of collected products are cut a trifle shorter than the outside sections greatly improving the appearance of heavy papers. Elimination of transfer from one set of pins to another improves appearance and avoids dangerous folder chokes. The patented Expansion Bands and patented Safety Gate make it the safest of all Newspaper Folders.

Send for New Catalog on
this Modern Press

WALTER SCOTT & CO., INC.

PLAINFIELD, N. J.



Intertype maintenance isn't as simple as this, but...

INTERTYPE

BROOKLYN 2, NEW YORK

Automatic maintenance of line-composing machines is a feature of the future... if ever. But *simplified* maintenance is a characteristic of *today's* Intertype machine. ■ There is *less* maintenance, basically, because there are fewer parts ...and these parts are *made to last.* Main cams and other important castings, for example, are made of wear-resisting, chrome-nickel-iron alloy. Critical wearing surfaces are hardened. Many steel parts are specially treated to protect them against injury by rust and tarnish. ■ Cleaning is made easy. Covers over moving parts help prevent accumulations of dust and dirt. Molds are treated by the Pentrate process to avoid metal adhesions and carbon deposits. Parts are accessible and components like the Autospacer are readily disassembled. ■ The use of Alemite fittings simplifies lubrication. Oilite bearings are employed where the use of an oil can or grease gun might allow the lubricant to reach the matrices. ■ All these features contribute to simplified *maintenance*... a constant goal of Intertype research and an important step toward greater composing-room efficiency.

■ ***Look to Progressive Intertype***

SET IN INTERTYPE BETON FAMILY